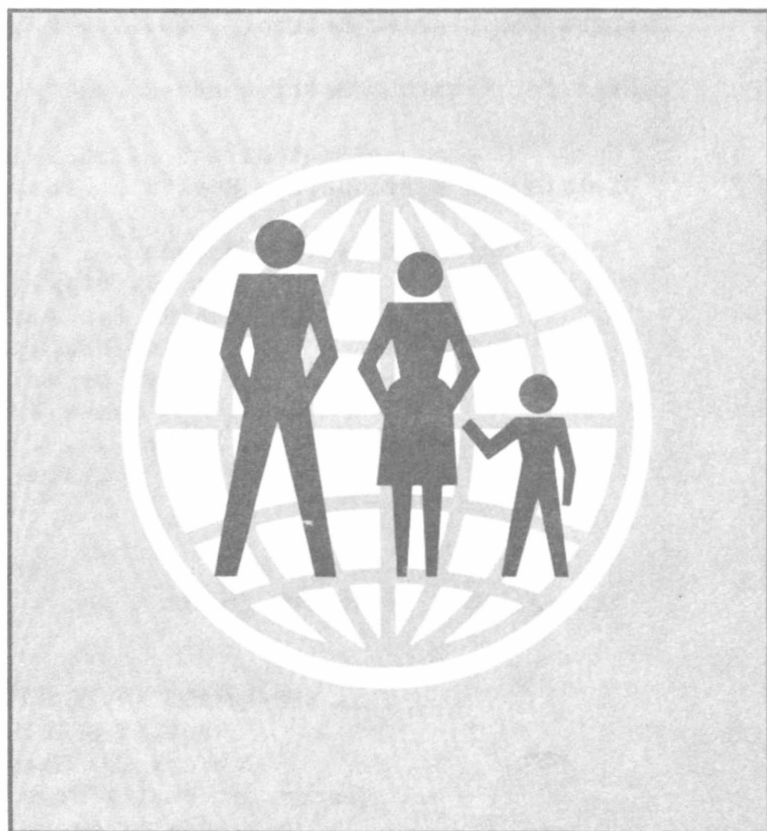


ANNUAL SUMMARY 1981
Issued November 1985

CENTERS FOR DISEASE CONTROL

ABORTION

SURVEILLANCE



PREFACE

Epidemiologic surveillance is one of the key functions of the Centers for Disease Control. It has become a tool for studying such diverse public health concerns as air pollution, cancer, birth defects, Rh hemolytic disease, violence, and abortion. Recognizing both the importance of abortion as a public health issue and the need for national abortion statistics, the Division of Reproductive Health (DRH), formerly known as the Family Planning Evaluation Division, began in 1969 a continuous epidemiologic surveillance of abortion in the United States. The objectives of this surveillance are twofold: 1) to document the number and characteristics of women obtaining abortions, and 2) to eliminate preventable mortality and morbidity related to abortion. This report documents the most recent data available to CDC for the year 1981 and updates previous abortion surveillance reports. This issue provides 1) demographic and epidemiologic data on legal abortions in 1981, 2) data on trends in the practice of legal abortion for 1972-1981, 3) data on measures to prevent cervical injury during suction curettage abortion, 4) data comparing urea-prostaglandin with hypertonic saline for instillation abortion, dilatation and evacuation abortion, 4) information on the effects of induced abortion on subsequent reproduction, 5) measures to prevent uterine perforation during curettage abortion, and 6) a reference list of DRH publications relating to abortion.

SUGGESTED CITATION

Centers for Disease Control: Abortion Surveillance 1981

Issued November 1985

Library of Congress Catalog Card No. 74-644021

Centers for Disease Control James O. Mason, M.D., Director

Center for Health Promotion and Education Dennis D. Tolsma, M.P.H.,
Director

Division of Reproductive Health Roger W. Rochat, M.D., Director

Pregnancy Epidemiology Branch Carol J. R. Hogue, Ph.D., Chief

Nancy J. Binkin, M.D., M.P.H., Medical Epidemiologist

Pamela R. H. Lang, M.D., Pregnancy Surveillance Officer

H. Trent MacKay, M.D., Pregnancy Surveillance Officer

Stuart Berman, M.D., Pregnancy Surveillance Officer

James W. Buehler, M.D., Medical Epidemiologist

Research and Statistics Branch Jack C. Smith, M.S., Chief

Elaine P. Rhodenhiser, Statistical Assistant

Joyce M. Hughes, Public Health Advisor

Linda C. Asher, Statistical Assistant

Merrell H. Ramick, Statistical Assistant

Educational Resources Branch Priscilla B. Holman, M.S. Ed., Chief

Laura W. Leathers, Writer-Editor

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

PUBLIC HEALTH SERVICE

Centers for Disease Control

Center for Health Promotion and Education

Division of Reproductive Health

Atlanta, Georgia 30333

CONTENTS

	<u>Page</u>
Section I. - Summary	1
Section II. - Numbers and Characteristics of Women Obtaining Abortions	2
A. Number of Abortions by State of Occurrence	2
B. Variations in Data on Characteristics of Women Obtaining Abortions	3
C. Residence Status	3
D. Age	4
E. Race	4
F. Marital Status	5
G. Number of Live Births	5
H. Previous Induced Abortions	5
I. Weeks of Gestation	5
J. Type of Procedure	6
K. Weeks of Gestation by Age Group	6
L. Weeks of Gestation by Race	6
M. Age Group by Race	6
N. Marital Status by Race	6
O. Interpretation	6
Section III. - Abortion-Related Mortality	8
A. Definitions	8
B. Legal-Abortion Mortality	9
C. Illegal-Abortion Mortality	12
D. Spontaneous-Abortion Mortality	12
Section IV. - Abortion-Related Morbidity	13
A. General	13
B. The Joint Program for the Study of Abortion	14
Section V. - Division of Reproductive Health Publications Related to Abortion	15
References	23

TABLES

Summary		Page
Table	Characteristics of Women Obtaining Abortions, United States, 1972-1981	iv
Table 1	Source of Abortion Reporting, Number of Reported Abortions, and Abortion Ratio and Rate, by Year, United States, 1969-1981	24
Table 2	Reported Number of Legal Abortions, and Abortion Ratios and Rates by State of Occurrence, 1981	25
Table 3	Reported Legal Abortions Obtained by Out-of-State Residents, 1981	26
Table 4	Reported Legal Abortions by State of Residence, 1981	27
Table 5	Reported Legal Abortions by Age and State of Occurrence, Selected States, 1981	29
Table 6	Reported Legal Abortions Obtained by Teenagers, Selected States, 1981	30
Table 7	Reported Legal Abortions by Race and State of Occurrence, Selected States, 1981	31
Table 8	Reported Legal Abortions by Marital Status and State of Occurrence, Selected States, 1981	32
Table 9	Reported Legal Abortions by Number of Live Births and State of Occurrence, Selected States, 1981	33
Table 10	Reported Legal Abortions by Number of Previous Induced Abortions, Selected States, 1981	34
Table 11	Reported Legal Abortions by Weeks of Gestation and State of Occurrence, Selected States, 1981	35
Table 12	Reported Legal Abortions by Type of Procedure and State of Occurrence, Selected States, 1981	36
Table 13	Number and Percentage of Reported Legal Abortions by Weeks of Gestation and Type of Procedure, 1981	37
Table 14	Number and Percentage of Reported Legal Abortions by Weeks of Gestation and Age Group, 1981	37
Table 15	Number and Percentage of Reported Legal Abortions by Weeks of Gestation and Race, 1981	38
Table 16	Number and Percentage of Reported Legal Abortions by Age Group and Race, 1981	38
Table 17	Number and Percentage of Reported Legal Abortions by Marital Status and Race, 1981	39
Table 18	Death-to-Case Rate for Legal Abortions by Year, United States, 1972-1981	39
Table 19	Death-to-Case Rate for Legal Abortions by Weeks of Gestation, United States, 1972-1976	40
Table 19a	Death-to-Case Rate for Legal Abortions by Weeks of Gestation, United States, 1977-1981	40
Table 20	Death-to-Case Rate for Legal Abortions by Type of Procedure, United States, 1972-1976	41
Table 20a	Death-to-Case Rate for Legal Abortions by Type of Procedure, United States, 1977-1981	41

Table 21	Legal-Abortion Deaths by Type of Procedure and Weeks of Gestation, United States, 1972-1976	42
Table 21a	Legal-Abortion Deaths by Type of Procedure and Weeks of Gestation, United States, 1977-1981	42
Table 22	Death-to-Case Rate for Legal Abortions by Type of Procedure and Weeks of Gestation, United States, 1972-1976	43
Table 22a	Death-to-Case Rate for Legal Abortions by Type of Procedure and Weeks of Gestation, United States, 1977-1981	43

FIGURES

Figure 1	Legal Abortion Ratios, United States, 1969-1981	44
Figure 2	Percentage Distribution of Reported Legal Abortions by Age Group, Selected States, 1979-1981	45
Figure 3	Legal Abortion Ratios by Age Group, United States, 1979-1981	46
Figure 4	Legal Abortion Ratios by Race, United States, 1979-1981	47
Figure 5	Legal Abortion Ratios by Marital Status, United States, 1979-1981	48
Figure 6	Legal Abortion Ratios by Number of Live Births, United States, 1979-1981	49
Figure 7	Abortion-Related Deaths by Year, United States, 1972-1981	50
Figure 8	Abortion-Related Deaths by Category and Year, United States, 1972-1981	51

Summary Table
Characteristics of Women Obtaining Abortions,
United States, 1972-1981

<u>Characteristics</u>	Percentage Distribution ¹									
	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>
<u>Reported Number of Legal Abortions</u>	586,760	615,831	763,476	854,853	988,267	1,079,430	1,157,776	1,251,921	1,297,606	1,300,760
<u>Residence</u>										
Abortion in-state	56.2	74.8	86.6	89.2	90.0	90.0	89.3	90.0	92.6	92.5
Abortion out-of-state	43.8	25.2	13.4	10.8	10.0	10.0	10.7	10.0	7.4	7.5
<u>Age</u>										
< 19	32.6	32.7	32.7	33.1	32.1	30.8	30.0	30.0	29.2	28.0
20-24	32.5	32.0	31.8	31.9	33.3	34.5	35.0	35.4	35.5	35.3
≥ 25	34.9	35.3	35.6	35.0	34.6	34.7	34.9	34.6	35.3	36.7
<u>Race</u>										
White	77.0	72.5	69.7	67.8	66.6	66.4	67.0	68.9	69.9	69.9
Black and other	23.0	27.5	30.3	32.2	33.4	33.6	33.0	31.1	30.1	30.1
<u>Marital Status</u>										
Married	29.7	27.4	27.4	26.1	24.6	24.3	26.4	24.7	23.1	22.1
Unmarried	70.3	72.6	72.6	73.9	75.4	75.7	73.6	75.3	76.9	77.9
<u>Number of Live Births²</u>										
0	49.4	48.6	47.8	47.1	47.7	53.4	56.6	58.1	58.4	58.3
1	18.2	18.8	19.6	20.2	20.7	19.1	19.2	19.1	19.5	19.7
2	13.3	14.2	14.8	15.5	15.4	14.4	14.1	13.8	13.7	13.7
3	8.7	8.7	8.7	8.7	8.3	7.0	5.9	5.5	5.3	5.3
≥ 4	10.4	9.7	9.0	8.6	7.9	6.2	4.2	3.5	3.2	3.0
<u>Type of Procedure</u>										
Curettage	88.6	88.4	89.7	90.9	92.8	93.8	94.6	95.0	95.5	96.1
Suction Curettage	65.2	74.9	77.4	82.5	82.6	90.8	90.2	91.3	89.8	90.4
Sharp Curettage	23.4	13.5	12.3	8.4	10.2	3.0	4.4	3.7	5.7	5.7
Intrauterine										
Instillation	10.4	10.4	7.8	6.2	6.0	5.4	3.9	3.3	3.1	2.8
Hysterotomy/ Hysterectomy	0.6	0.7	0.6	0.4	0.2	0.2	0.1	0.1	0.1	0.1
Other	0.5	0.6	1.9	2.4	0.9	0.7	1.4	1.6	1.3	1.0
<u>Weeks of Gestation</u>										
< 8	34.0	36.1	42.6	44.6	47.0	51.2	52.2	52.1	51.7	51.2
9-10	30.7	29.4	28.7	28.4	28.0	27.2	26.9	27.0	26.2	26.8
11-12	17.5	17.9	15.4	14.9	14.4	13.1	12.3	12.5	12.2	12.1
13-15	8.4	6.9	5.5	5.0	4.5	3.4	4.0	4.2	5.2	5.2
16-20	8.2	8.0	6.5	6.1	5.1	4.3	3.7	3.4	3.9	3.7
≥ 21	1.3	1.7	1.2	1.0	0.9	0.9	0.9	0.9	0.9	1.0

¹Excludes unknowns. Since the number of states reporting each characteristic varies from year to year, temporal comparisons should be made with caution.

²For years 1972-1977, data indicate number of living children.

I. SUMMARY

For 1981, the 50 States and the District of Columbia reported 1,300,760 abortions (Summary Table), which represents less than a 1% increase over the number reported for 1980. The national abortion rate decreased from 25 abortions per 1,000 women 15-44 years of age in 1980 to 24 per 1,000 in 1981. A slight decrease also was noted in the abortion ratio, from 359 abortions per 1,000 live births in 1980 to 358 per 1,000 in 1981.

As in previous years, women obtaining abortions were likely to be young, white, unmarried, and of low parity. Approximately 63% were under 25 years of age, 70% were white, 78% were unmarried, and 58% had had no live births. Ninety-two percent of all abortions were performed in the woman's State of residence.

The percentage of women undergoing an abortion by instrumental evacuation (curettage, dilatation and evacuation [D&E]) has continued to increase, accounting for 96% of abortions in 1981. Suction curettage accounted for 94% of these curettage abortions. Instillation techniques were used for only about 3% of all abortions and hysterotomy or hysterectomy were used for less than 1%. Curettage was the procedure used for virtually all abortions done at <12 weeks' gestation. The percentage of abortions being performed by D&E at 13-15 weeks and 16-20 weeks of gestation has continued to rise, and D&E is now the most common method used at these gestational ages. However, the percentage of abortions done by D&E at >21 weeks' gestation dropped between 1980 and 1981, from 29.7% to 23.9%.

In 1981, as in previous years, more than half of the reported abortions were performed in the first 8 weeks of gestation, with 90% performed in the first 12 weeks. Younger women continued to obtain abortions at later gestational ages than did older women; 8% of women <19 years of age had abortions performed at gestational ages >16 weeks as compared with 4% of the women >19 years of age. Women of black and other races were slightly more likely to obtain abortions in the second trimester than were white women (12.9% versus 10.6%).

Eleven women died as a result of abortion in 1981. Of the 11 deaths, 3 were associated with spontaneous abortion, 1 with illegal abortion, and 7 with legal abortion. Deaths from spontaneous and legal abortion reflect the lowest numbers recorded since CDC began its abortion surveillance. The death-to-case rate for legal abortions was 0.5 per 100,000 abortions, which compares with a rate of 0.7 in 1980.

Since the last Abortion Surveillance Report was issued, four studies based on data from the Joint Program for the Study of Abortion (JPSA III) have been published. The first study examined risk factors for cervical injury among women obtaining first trimester abortions. Performance of the abortion by a resident rather than an attending physician and use of general rather than local anesthesia were associated with higher rates of cervical injury. Laminaria had a protective effect when compared with rigid dilation.

In the second JPSA III study, intra-amniotic instillation of urea-prostaglandin was compared with hypertonic saline to determine relative

risks of the two procedures for women undergoing second trimester abortion. Both agents were highly effective in producing an abortion, but saline instillation had a significantly higher rate of serious complications and a significantly longer induction-to-abortion time.

In the third study, intra-amniotic instillation of urea-prostaglandin was compared with dilatation and evacuation (D&E) to determine relative risks of the two procedures for women undergoing second trimester abortion. After adjusting for multiple potential confounding variables, the risk of serious complications was found to be two fold higher for second trimester urea-prostaglandin instillation than for D&E. Although D&E appeared to be safer overall for midtrimester abortions, the rates of serious complications among women obtaining abortion after 16 weeks of gestation were comparable for the two methods.

The fourth JPSA III analysis examined risk factors for uterine perforation during curettage abortion. Performance of the abortion by a resident rather than an attending physician, advanced gestational age, and previous delivery were associated with increased risks, whereas the use of laminaria was associated with a decreased risk.

II. NUMBERS AND CHARACTERISTICS OF WOMEN OBTAINING ABORTIONS

A. Number of Abortions by State of Occurrence

The Centers for Disease Control (CDC) received abortion statistics for 1981 by State of occurrence from 3 sources: 1) central health agencies, 2) hospitals and/or other medical facilities, and 3) the Alan Guttmacher Institute (AGI). Table 1 summarizes the development of CDC's abortion reporting sources since surveillance of abortions began in 1969. Data are received from 52 areas: 49 States, upstate New York, New York City, and the District of Columbia. In 1981, 46 of these areas reported data through central health agencies. Hospitals and/or other medical facilities provided data from four States, and AGI provided data for Alaska and Kentucky.

The total number of legal abortions reported in 1981 was 1,300,760, which represents less than a 1% increase over the number reported for 1980. This figure is low in comparison with the 8% increase between 1978 and 1979 and the 4% increase between 1979 and 1980.

California and New York reported the largest number of abortions, as they have done consistently since 1970 (Table 2). In 1981, 28% of all abortions were reported in these two States. Alaska, South Dakota and Wyoming each reported less than 2,000 abortions. The largest percentages of increase in numbers of abortions in 1981 were reported from Kentucky (37%) and South Dakota (21%), whereas the largest decreases were reported from Alabama (25%) and Wyoming (17%). However, caution must be used in interpreting these figures since the source of reporting and reporting methods may vary for individual States from year to year.

Live birth data used in calculating abortion ratios were obtained from central health agencies for 44 areas and from the National Center for Health Statistics for 8 areas. The national abortion ratio decreased slightly from 359 per 1,000 live births in 1980 to 358 per 1,000 live births in 1981 (Figure 1 and Table 1). This represents the first decrease noted in the abortion ratio since CDC began abortion surveillance. Abortion ratios decreased in 1981 in 30 of the individual reporting areas. The highest abortion ratios were found in the District of Columbia and New York City, while the lowest were found in Utah, West Virginia and Wyoming (Table 2).

The national abortion rate also decreased for the first time in 1981, from 25 abortions per 1,000 women 15-44 years of age in 1980 to 24 per 1,000 in 1981 (Table 1). Abortion rates ranged from a low of 6 per 1,000 in West Virginia and Wyoming to 158 per 1,000 in the District of Columbia (Table 2).

B. Variations in Data on Characteristics of Women Obtaining Abortions

Most States now provide demographic data on women who obtain abortions. However, in the past, the number of States reporting data has varied considerably because of changes in State laws and regulations governing reporting. Therefore, caution should be used in examining temporal differences in the characteristics of women obtaining abortion. A separate document is being prepared that will provide an analysis of demographic trends in abortion in a subset of States consistently reporting demographic data.

Because of variations in the reporting of certain demographic characteristics, percentages shown in the Summary Table, the univariate tables, and the figures may differ slightly from those in bivariate tables, which represent data from fewer States.

Data on characteristics of women obtaining abortions are collected by State of occurrence. In 15 reporting areas, abortions for nonresidents comprise more than 10 percent of abortions performed (Table 3). More than one-half (53.1%) of the abortions performed in North Dakota and approximately one-half (49.4%) of the abortions performed in the District of Columbia during 1981 were for nonresidents. Abortion ratios use live births to residents of a state as the denominator and abortions occurring in the State to both residents and nonresidents as the numerator and thus should be interpreted with caution in those areas in which a large proportion of abortions are obtained by nonresidents.

C. Residence Status

Residence status (i.e., whether a woman lived in or outside the State in which she obtained an abortion) was known for 90% of the women who obtained abortions in 1981. Ninety-two percent of these women obtained abortions in their State of residence (Table 3). This is similar to the percentage reported in previous years.

The West North Central region had the highest proportion of women obtaining abortions outside their State of residence (15%) (Table 4). The Pacific region had the smallest proportion of women obtaining abortions outside their State of residence (1%). As in 1980, the States with the highest percentages of women having abortions out-of-state were Wyoming (62%), West Virginia (51%), and South Dakota (37%). By contrast, <1% of the women in New York, Michigan, Florida, Colorado, California, and Hawaii obtained out-of-State abortions.

D. Age

Data on age for women obtaining abortions were available from 40 States and the District of Columbia (83% of all reported abortions). Women <19 years of age accounted for 28% of abortions, women 20-24 accounted for 35%, and women ≥25 accounted for 36% (Table 5). In comparison with previous years, this represents a decline in the percentage of the total abortions obtained by teenagers. This decline was accompanied by an increase in the percentage of abortions obtained by women ≥25 years of age. Women <15 years of age continued to account for <1% of all abortions (Table 5). Arkansas, Kansas, North Dakota, and South Dakota had the highest percentages of total abortions obtained by teenagers (approximately 35%). The District of Columbia, Hawaii, and New York City had the highest percentages of women ≥25 years of age obtaining abortions (>41%). Women 20-24 years of age obtained the largest percentage of all abortions performed from 1979-1982 (Figure 2).

Abortions obtained by teenagers by single year of age were reported from 32 States (Table 6). As in 1980, 57% of abortions obtained by teenagers were obtained by women 18-19 years of age; 3% were obtained by women <15 years of age.

The abortion ratios by age groups were similar for the years 1979-1981. Women <15 years of age had the highest ratio of legal abortions to live births, followed by women ≥40 years of age (Figure 3). The lowest ratios were seen among women 25-29 and 30-34.

E. Race

Data on race for women obtaining abortions were available from 34 States and the District of Columbia (70% of all reported abortions.) About 70% of women obtaining abortions were white (Table 7). This percentage is virtually identical to that observed in 1980. As in previous years, Hawaii and the District of Columbia reported that almost 2/3 of the abortions in the State were obtained by women of black and other races.

The abortion ratio was higher for women of black and other races than for white women. Figure 4 shows that the difference between abortion ratios by race was similar for 1979-1981.

F. Marital Status

Data on marital status for women obtaining abortions were available from thirty-four States and the District of Columbia (71% of all reported abortions). Seventy-four percent of the women were unmarried at the time of abortion (Table 8). This is a slight increase over 1980.

Unmarried women continued to have considerably higher abortion ratios than married women (Figure 5). For the years 1979-1981, the abortion ratio for unmarried women was approximately 15 times higher than the ratio for married women. However, the large difference in abortion ratios between married and unmarried women does not take into account those women who conceived premaritally but who married before giving birth.

G. Number of Live Births

Data on the number of live births for women obtaining abortions were available from 33 States (54% of all reported abortions). Fifty-seven percent of the women had had no live births whereas only 3% had had 4 or more live births (Table 9). These percentages were similar to those observed in previous years.

Women who had had one live birth had the lowest abortion ratio, and those women who had had no live births had the highest (Figure 6). The abortion ratios were slightly lower in 1981 than in 1980 for all parities.

H. Previous Induced Abortions

Data on previous induced abortions for women obtaining abortions were available from 33 States and the District of Columbia (53% of all reported abortions). A total of 33% of abortions were obtained by women with one or more previous abortions, including 23% with one previous abortion, 7% with 2 abortions, and 3% with 3 or more (Table 10). In comparison with 1980 data, 1981 showed an increasing trend toward repeat induced abortions. The highest proportion of abortions obtained by women having one or more previous induced abortions was seen in New York City (50%); the lowest proportion was in Nebraska (7%).

I. Weeks of Gestation

Data on weeks of gestation for women obtaining abortions were available from 39 States and the District of Columbia (83% of all reported abortions). About half of reported abortions were performed in the first 8 weeks of gestation, with 87% performed at <12 weeks' gestation. Five percent were performed between 13-15 weeks, 4% between 16-20 weeks, and 1% at ≥21 weeks (Table 11). The distribution was similar to that observed in 1980.

J. Type of Procedure

Data on type of procedure for women obtaining abortions were available from 39 States and the District of Columbia (81% of all reported abortions). Ninety-five percent of abortions were performed by instrumental evacuation (curettage, dilatation and evacuation (D&E)) (Table 12). Suction curettage accounted for 90% of the instrumental evacuations. Instillation techniques were used for almost 3% of all abortions performed; hysterotomy or hysterectomy were used for only 0.1%. In recent years, the percentage of abortions being performed by D&E at 13-15 and 16-20 weeks of gestation has continued to rise. However, the percentage of abortions done by D&E at >21 weeks' gestation dropped between 1980 and 1981, from 29.7% to 23.9% (Table 13).

K. Weeks of Gestation by Age Group

Weeks of gestation by age group was known for 64% of women obtaining abortions (reported from 33 States). Younger women obtained abortions at later gestational ages than did older women; 8% of women <19 years of age had abortions performed at >16 weeks' gestation as compared with 4% of women >19 years of age (Table 14). In general, the tendency to obtain abortions early increased with the age of women, peaking in the 35-39 year age group.

L. Weeks of Gestation by Race

Weeks of gestation by race was known for 52% of women obtaining abortions (reported from 29 States). White women were more likely to obtain abortions at <8 weeks' gestation (50% versus 46%), while women of black and other races were slightly more likely to obtain abortions at >13 weeks' gestation (13% versus 11%) (Table 15).

M. Age Group by Race

Age group by race was known for 63% of women obtaining abortions (reported from 34 States). White women generally obtained abortions at younger ages than women of black and other races (Table 16). Less than 2% of both white women and women of black and other races obtained abortions at age 40 or greater.

N. Marital Status by Race

Marital status by race was known for 57% of women obtaining abortions (reported from 30 States). In each race category over 3/4 of the women obtaining abortions were unmarried (Table 17).

O. Interpretation

Since 1969, when CDC began collecting information on legal abortion, the total number of abortions performed has increased each year. The greatest increases, observed between 1969 and 1973, were probably attributable to the expansion of the surveillance system and to the increasing number of States in which abortion became legal. For all years since 1976 except for 1979, the annual percentages of increase in numbers of abortions have declined. The

1981 increase is the lowest yet reported, and for the first time both the abortion rate and ratio declined.

The number of abortions reported to CDC in 1981 was probably lower than the number actually performed. Our numbers are based primarily on summary information provided by State health departments and are lower than those obtained by AGI, which uses direct surveys of abortion providers. The 1981 CDC total is 18% lower than that reported by AGI (1).

This underreporting may produce some biases in the CDC data. Abortions are probably performed at earlier gestational ages in physicians' offices than in clinics and hospitals, and those done in physicians' offices may be less likely to be reported to health agencies. Thus, the underreporting may bias gestational age distributions toward the later stages of pregnancy.

Since 1975, the vast majority of women have obtained abortions in their State of residence. The 8% who continue to obtain abortions out of State may do so because of lack of facilities in their area of residence and/or the proximity of their residence to a State boundary, with the nearest provider being in the adjoining State.

Because abortions are reported by State of occurrence and because information on State of residence is incomplete, abortion rates and ratios are calculated by place of occurrence. The abortion rate denominator is resident women 15-44 years of age, and the abortion ratio denominator is resident births. The resulting abortion rates and ratios therefore may be elevated in States where a large number of abortions are obtained by out-of-State residents. Similarly, low rates and ratios may result in States where many of the State's women obtain their abortions elsewhere.

The age distribution of women obtaining abortion has continued to shift from the <19 age group to older age groups, largely as a result of a similar demographic shift from fewer women in the <19 age group (2). As in previous years, women at each end of the reproductive-age distribution had the highest abortion-to-live birth ratios.

Women of black and other races accounted for 50% of abortions obtained by women under 15, but less than 30% of abortions in older age categories. In part, the higher percentage of abortions among black teenagers 10-14 years of age reflects the younger age at first intercourse for blacks than for whites (3). During 1981, the age-specific fertility rate in this age group was 8.2 times higher for blacks and other races than for whites (4).

The percentage of women whose reported abortion was preceded by at least one other abortion has continued to rise. This increase probably reflects the growing number of women who have had an abortion, rather than any increased reliance on abortion as a primary method of birth control (5).

Curettage accounts for virtually all abortions performed at <12 weeks' gestation. D&E has continued to increase as a method of abortion between 13-15 and 16-20 weeks of gestation, probably because of its greater safety, convenience, and cost as compared with instillation methods (6).

The number of women who have died as a result of abortion has decreased steadily since 1972; 11 deaths were reported in 1981, the lowest number yet recorded. During the 11-year period for which CDC has maintained mortality statistics, the number of illegal abortion deaths decreased the most (97%), while spontaneous abortion deaths decreased 88% and legal abortion deaths decreased 71%.

III. ABORTION-RELATED MORTALITY

A. Definitions

The abortion surveillance reports for each year 1975-1977 described the process by which we established the definitions we use for abortion mortality surveillance. In the 1978 abortion surveillance report, we expanded these definitions to clarify their use in complex cases. A group of experts assisted in the process.*

1) Induced Abortion: A procedure intended to terminate a suspected or known intrauterine pregnancy and to produce a nonviable fetus at any gestational age. For this definition, the deciding factor is the intent of the procedure rather than its result. Thus, if the procedure failed to have any effect on the pregnancy, we would nevertheless consider it an induced abortion. Also, if the person performing the procedure believed the woman had an intrauterine pregnancy with a living embryo or fetus, we would consider the procedure an induced abortion, even if the woman in fact had an ectopic or molar pregnancy, or was not pregnant at all. However, if a molar pregnancy, ectopic pregnancy, or death of the fetus had already been diagnosed before any intervention, we would not regard the procedure as an induced abortion.

We subcategorize induced abortions as "legal" or "illegal":

- a) Legal abortion: A procedure performed by a licensed physician or someone acting under the supervision of a licensed physician.
- b) Illegal abortion: A procedure performed by the woman herself, or by someone who was neither a licensed physician nor acting under the supervision of a licensed physician.
- 2) Spontaneous abortion: Either of the following types of complications of pregnancy, occurring before completion of the 20th menstrual week of gestation and not caused by an induced abortion:
 - a) Complete or incomplete expulsion of the products of conception from the uterus.
 - b) Failure of the embryo to develop or death of the fetus in utero.

*William E. Brenner, M.D., Mark C.E. Cheng, M.D., Mary E. Converse, R.R.A., Irvin M. Cushner, M.D., Joseph H. Davis M.D., Richard E. Dixon, M.D., John I. Fishburne, M.D., C.E. Gibbs, M.D., Sadjia Greenwood, M.D., Perry A. Henderson, M.D., Lester T. Hibbard, M.D., Jane E. Hodgson, M.D., Irwin H. Kaiser, M.D., Richard H. Kaslow, M.D., Mary Grace Kovar, Dr.P.H., Sue Meads, Ervin E. Nichols, M.D., Ruth Roemer, J.D., Harold Schulman, M.D., Richard H. Soderstrom, M.D., Lee B. Stevenson, M.D., Steele F. Stewart, Jr., M.D., Phillip G. Stubblefield, M.D., Christopher Tietze, M.D., and Louise B. Tyrer, M.D.

We assume that these complications occurred spontaneously unless:

- a) The woman admitted to someone that she had undergone an induced abortion; or
- b) Physical or pathological examination of the woman revealed trauma to the reproductive tract suggestive of an induced abortion;
- 3) Unknown category of abortion: If we cannot obtain sufficient information to categorize an abortion as either induced or spontaneous we categorize it as "unknown."
- 4) Abortion-related death: A death that resulted from a direct complication of an abortion, an indirect complication caused by the chain of events initiated by the abortion, or aggravation of a preexisting condition by the physiologic or psychologic effects of the abortion. To minimize the possibility of our failing to recognize an abortion-related death, we investigate any death occurring within 42 days of an abortion, and any death resulting from an illness that began within 42 days of an abortion. Unlike current International Classification of Disease, definitions of maternal death, which exclude deaths occurring more than 42 days after the termination of pregnancy, we consider any abortion-related death attributable to abortion as abortion-related, regardless of how long it occurred after the abortion.
- 5) Ectopic pregnancy: Between 1972 and 1981, 21 deaths from ectopic pregnancy occurred soon after an attempted legally induced abortion. In the 1978 abortion surveillance report, we considered such deaths abortion-related and included them as a separate subcategory of legally induced abortion. In 1979, CDC began the independent surveillance of ectopic pregnancy-related mortality, and published its first ectopic pregnancy surveillance report in 1982. In this abortion surveillance report, therefore, we exclude all deaths associated with ectopic pregnancies.

B. Legal-Abortion Mortality

Seven women died after legal abortions in 1981, compared with 9 in 1980, 18 in 1979, and 9 in 1978 (Figure 8). As in previous years, these numbers exclude deaths associated with ectopic pregnancies. The annual number of deaths for 1972-1981 has been adjusted to reflect any additional abortion deaths during these years that were investigated after the most recent abortion surveillance report was published.

When the total of reported legal abortions was used as the denominator, the overall death-to-case rate for legal abortion was 0.5 per 100,000 abortions for 1981 (Table 18). This death-to-case rate for legal abortion is similar to those reported for 1976-1980 and considerably lower than the rates reported for 1972-1975. Possible reasons for the decline in the death-to-case rates after 1975 are: 1) The increasing percentage of abortions performed at earlier gestational ages, when it is safer to perform such procedures; 2) physicians' improved clinical skills in performing the abortion and in managing complications; 3) the increasing percentage of second-trimester abortions performed by D&E rather than instillation methods; and 4) underreporting of deaths related to legal abortion after 1975. We believe this last possibility is unlikely, except possibly for the most recent years (because of occasional delays in reporting deaths).

The data aggregated for 1972-1976 and for 1977-1981 show that the risk of death from legal abortion rose with increasing gestational age during both of these study intervals (Tables 19 and 19a). However, the magnitude of risk changed. During 1972-1976, abortions performed at ≥ 21 weeks' gestation carried the greatest risk (24.7 per 100,000 procedures), a death-to-case rate 41 times that for abortions performed at ≤ 8 weeks' gestation (0.6 per 100,000 procedures). By contrast, during 1977-1981, abortions performed at 16-20 weeks had the greatest risk (7.8 per 100,000 procedures), with a death-to-case rate 16 times that for procedures performed at ≤ 8 weeks' gestation (0.5 per 100,000 procedures). The death-to-case rates for 1977-1981 were lower than those for 1972-1976 for each gestational age category.

To categorize deaths associated with particular abortion methods, we aggregated all suction curettage, sharp curettage, and D&E procedures as instrumental evacuation procedures. These were categorized by gestational age at the time of abortion: procedures performed at ≤ 12 completed menstrual weeks of gestation are referred to as curettage procedures (including suction and sharp curettage), and those performed at ≥ 13 weeks' gestation are referred to as dilatation and evacuation procedures.

During 1972-1976 and during 1977-1981 mortality rates were highest for hysterotomy/hysterectomy abortions, and lowest for abortions performed by instrumental evacuation; rates for instillation procedures were intermediate (Tables 20 and 20a). The risk of death associated with D&E was greater than that associated with other curettage procedures, but less than that associated with instillation procedures. From 1972-1976, D&E had an overall death-to-case rate of 8.5 per 100,000 abortions, compared with 17.8 for saline instillation and 13.1 for prostaglandin instillation (including other agents); for 1977-1981 the corresponding figures were 3.4 per 100,000 abortions for D&E, 4.3 for saline instillation, and 2.8 for prostaglandin instillation (Tables 22 and 22a).

The distribution of deaths after instrumental evacuation and instillation procedures changed between 1972-1976 and 1977-1981 as a result of changes in frequency of the type of procedures used and their associated death-to-case rate. During 1972-1976, 49% of all legal abortion-related deaths were associated with curettage procedures, 39% with instillation procedures, and 7% with hysterotomy and hysterectomy; from 1977-1981, 77% were associated with curettage procedures, 18% with instillation procedures, and 5% with hysterotomy and hysterectomy.

To examine the relationship between type of procedure and gestational ages we applied reported distributions for type of procedure by weeks of gestation for each year between 1972-1976 and 1977-1981 to the total number of abortions reported that year to determine the total number of abortions performed by each procedure at the different gestational ages. We used these figures as denominators for calculating death-to-case rates specific for both procedure and gestational age. Because many reporting areas categorize prostaglandin instillation with "other" methods, we included prostaglandin instillation and "other" methods in the denominator of the death-to-case rate for prostaglandin instillation.

For 1972-1976, the risk of death due to instrumental evacuation procedures increased with increasing gestational age from 0.5 per 100,000 abortions performed at ≤ 8 weeks' gestation to 21.5 at ≥ 21 weeks' gestation; for 1977-1981, the risk of death was 0.5 per 100,000 abortions at ≤ 8 weeks' gestation and 8.3 at ≥ 21 weeks' gestation (Tables 22 and 22a). Our data do not permit us to compare the risk of death from instrumental evacuation at 4-6 weeks' gestation with that at 7-8 weeks' gestation.

Death-to-case rates for most procedures declined from the first period (1972-1976) to the second (1977-1981). For instrumental evacuation, there was a 50% drop, from 1.6 to 0.8 per 100,000 abortions (Tables 20 and 20a). The decline in mortality was 68% for intrauterine instillation procedures, from 15.2 to 4.9 per 100,000 abortions. An apparent increase in the mortality associated with hysterotomy or hysterectomy (from 42.4 to 58.9 per 100,000 abortions) may reflect an increase in the proportion of women obtaining such abortions who have elevated risks due to preexisting medical conditions.

The death-to-case rates for prostaglandin instillation and saline instillation vary greatly when compared for specific gestational-age intervals. However, because of the relatively small number of deaths and cases involved, these differences are probably due to statistical artifact. Moreover, the different sources reporting to CDC used various methods of categorization, which distorts the denominators used to calculate procedure-specific, death-to-case rates for instillation methods.

The following case history provides examples of factors contributing to the risk of death from legal abortion:

Case History --A 22-year-old black, unmarried, eleventh grade student, gravida 1, with no preexisting medical condition, underwent suction curettage plus sharp curettage in a physician's office for an estimated 12-week pregnancy. Payment was by private sources. Local anesthesia was given by paracervical block. The young woman became uncooperative during the procedure and was given 5 milligrams of diazepam intravenously. She remained uncooperative and, as a result, the procedure was halted. The physician recommended that the procedure be completed at a hospital. The patient, after discussing this recommendation with her mother, refused hospitalization. She felt she could cooperate sufficiently to allow the procedure to be completed in the physician's office. Another 5 mg. of diazepam was given intravenously. However, soon after the procedure was resumed, the young woman "began to buck and began severe violent gyrating movements." The physician felt that, though he had evacuated the uterus thoroughly, he had perforated the anterior walls of the uterus. He again recommended hospitalization, which the patient again refused. The patient was observed for three hours in the office, during which time she received intravenous oxytocin. Her vital signs remained stable; there was very little vaginal bleeding. Her hematocrit was 31%. The mother and daughter left the office after agreeing to return the following day. The physician called the home twice, and was told that the patient was resting comfortably and bleeding minimally. The patient did not return to the office the next day, as scheduled; her mother called instead and told the doctor that her daughter was comfortable, resting well, feeling fine, and would return to the office the following day. However, that appointment was not kept either.

The physician, calling the patient's home frequently to inquire about her condition, was asked not to call anymore. It was 36 hours later--4 days after the procedure--at 4 a.m., that the family next contacted the physician. The mother, concerned that the patient was "not looking well," requested a house call. The physician responded and arrived at approximately 5 a.m. to find the young woman quite lethargic, but sitting upright and responsive. Emergency medical services were called; however, the young woman became unresponsive en route to the hospital. She was pronounced dead in the emergency room upon arrival. Her hematocrit was 18.4%, her hemoglobin 5.6 gms per dl. Death was attributed to uterine perforation, intra-abdominal hemorrhage, and peritonitis. No autopsy was performed.

Several behavioral risk factors contributed to this woman's death: 1) she apparently did not use contraception even though she did not wish to become pregnant; 2) the substantial lack of precision in the date of last menstrual period suggested that the patient may have been pregnant for considerably longer than 12 weeks; if this were so, the procedure should not have been initiated in the office; 3) in view of the patient's lack of cooperation, the physician should have required hospitalization and should not have attempted to continue the procedure; 4) behavior by the patient and her family that contributed to the death included refusing hospitalization, failing to return to the office on schedule, and neglecting to contact the physician until the patient was desperately ill.

C. Illegal-Abortion Mortality

One illegal abortion death occurred in 1981. We regard the number of deaths from illegal abortions as a reflection of the number of illegal abortions performed (7). The decline in the annual number of these deaths during 1972-81 probably reflects a decline in the number of illegal abortions as the availability of legal procedures throughout the country has increased. The one woman who died as a result of illegal abortion during 1981 was 41 years old. She was found dead from a massive air embolus after she attempted a self-induced abortion using a plastic straw. For unknown reasons, the patient had not sought legal abortion, nor had she seen a physician about her pregnancy.

D. Spontaneous-Abortion Mortality

Three women died in 1981 from spontaneous abortions. The following case history provides examples of some of the factors that contribute to the risk of death from spontaneous abortion:

Case history--A 28-year-old, gravida 2, spontaneous abortion 1, Mexican citizen, living in a large southwestern city, died of sepsis associated with a spontaneous abortion. The woman's previous pregnancy also terminated in spontaneous abortion complicated by infection.

Early during her second pregnancy, pelvic inflammatory disease was diagnosed; the patient was treated with oral antibiotics. Later in gestation she was treated for a urinary tract infection. She did not keep her scheduled follow-up appointment. However, she returned to her physician 10 days later,

at 18 weeks' gestation, complaining of abdominal pain and vaginal bleeding. She was admitted to the hospital. Her temperature was 99.8°F and her pulse was 100.

On pelvic examination, her uterus was felt to be 16-18 weeks' size, and was tender to palpation. The cervix was open, with purulent discharge present. Her physician diagnosed threatened abortion and pelvic inflammatory disease.

It was elected to treat her "conservatively" since the woman wished to continue her pregnancy. Intravenous ampicillin was started. The next day, with improvement in the woman's clinical condition, this medication was stopped and oral erythromycin was begun. Her temperature remained 99° to 100°F.

On the third hospital day, an ultrasound examination demonstrated active fetal heart motion and a biparietal diameter consistent with 17 weeks' gestation. Her temperature rose to 104°F, however. Intravenous cefoxitin and gentamicin were begun. The next day she spontaneously passed a macerated fetus and became hypotensive. Her physicians began treating her for septic shock. They transferred her to the intensive care unit, inserted a pulmonary artery catheter, and administered vasopressors. Under local anesthesia, the woman underwent uterine curettage to remove a retained placenta. The antibiotics were changed to intravenous penicillin, clindamycin, and gentamicin.

She developed azotemia, metabolic acidosis, and altered consciousness. Her white blood count was 2,000 with many immature white blood cells seen on the blood smear. Her pulmonary function deteriorated, and she required mechanical ventilation. The renal failure continued, and heart failure developed. The woman died on the seventh hospital day.

No autopsy was performed. The death certificate listed "septic spontaneous abortion" as the cause of death. Although the presence of intrauterine infection was apparent at the time of this woman's admission, her physicians did not terminate the pregnancy. Had this woman's pregnancy been promptly terminated following admission to the hospital, the subsequent fulminating sepsis could possibly have been avoided. This death emphasizes the importance of timely evacuation of an infected uterus.

IV. ABORTION-RELATED MORBIDITY

A. General

CDC has used a variety of approaches to conduct surveillance of abortion-related morbidity: 1) case investigations of suspected clusters of abortion complications involving legal, illegal, or spontaneous abortion; 2) a large multicenter, cohort study of early complications of legally induced abortion to determine the safest procedures; 3) critical review of scientific literature on the effects of induced abortion on subsequent childbearing; 4) prospective investigations of the health impact of public policy decisions on abortion; and 5) other studies as necessary. In this section, we describe recent results derived from these approaches.

B. The Joint Program for the Study of Abortion

From 1971 through 1978, CDC sponsored a multicenter, observational study of complications following legally induced abortion. Known as the Joint Program for the Study of Abortion, it continued the initial investigation (JPSA I) sponsored between 1970 and 1971 by the Population Council.

CDC has collected and analyzed its data in two additional studies, JPSA II and JPSA III. JPSA II involved about 80,000 abortions performed in 32 institutions between 1971 and 1975. JPSA III involved about 84,000 abortions performed in 13 institutions between 1975 and 1978. JPSA III data is the basis for the following reports.

Measures to Prevent Cervical Injury During Suction Curettage Abortion.

Cervical injury is one of the most frequent complications of suction curettage abortion. To investigate risk factors for cervical injury and strategies for prevention, we evaluated 15,438 cases of suction abortions carried out at ≤ 12 weeks' gestation. The overall incidence of cervical injury in this group was 1.03 per 100 abortions. Among factors potentially within the physician's control, use of laminaria rather than rigid dilation for cervical dilatation had a strong protective effect (relative risk 0.19, 95% confidence interval 0.07 to 0.52). Performance of the abortion by a resident rather than an attending physician (relative risk 2.0, 95% confidence interval 1.3 to 2.9) and use of general rather than local anesthesia (relative risk 2.6, 95% confidence interval 1.8 to 3.9) increased the rates of cervical injury. The risk was lower for women who had had one or more previous abortions (7).

Urea-Prostaglandin Versus Hypertonic Saline for Instillation Abortion. To study the comparative safety and efficiency of urea-prostaglandin and saline solution for instillation abortion, we analyzed data from 4,778 women who underwent instillation of saline solution and 2,805 who underwent instillation of urea-prostaglandin between 13 and 24 weeks of gestation. We examined the rates of serious and other complications and compared the instillation-to-abortion times for the two abortifacients.

Both agents were highly effective in producing abortion. However, saline instillation had a significantly higher risk of serious complication than did urea-prostaglandin (relative risk 2.3, 95% confidence interval 1.4 to 3.6). Serious complications included 1) 3 or more days of fever of $\geq 38^{\circ}\text{C}$, 2) hemorrhage requiring blood transfusion, and 3) unintended abdominal surgery. Urea-prostaglandin also had a significantly shorter induction-to-abortion time (14.2 versus 25.6 hours, $p < 0.001$). We concluded that urea-prostaglandin appears to be superior to hypertonic saline solution as an abortifacient (8).

Intra-amniotic Instillation of Urea-Prostaglandin Versus Dilatation and Evacuation. Although D&E is currently the most common method of performing midtrimester abortion in the United States, the intra-amniotic instillation of urea-prostaglandin has been proposed as a safer technique. To evaluate the comparative safety of urea-prostaglandin and D&E, we analyzed 2,805 abortions by urea-prostaglandin instillation and 9,572 abortions by D&E at 13 to 24 menstrual weeks of gestation.

The urea-prostaglandin procedure resulted in a significantly higher rate of serious complications than D&E (1.03 versus 0.49 per 100 abortions). After adjusting for patient age, race, parity, follow-up information, and preexisting conditions, the relative risk of serious complications associated with urea-prostaglandin was 1.9 (95% confidence interval 1.2 to 3.1). Although D&E appears to be safer overall in the midtrimester, most of the difference occurred among women obtaining abortion between 13 and 16 weeks' gestation. For women obtaining abortion after 16 weeks, the rates of serious complications were comparable, with a relative risk of 1.0 (95% confidence interval 0.4 to 2.5) (9).

Prevention of Uterine Perforation During Curettage Abortion. Uterine perforation is a potentially life-threatening complication of curettage abortion. To identify risk factors for perforation and strategies for prevention, we analyzed 67,175 curettage abortions in women at 24 weeks' gestation or earlier. The overall incidence of confirmed perforation was 0.9 per 1,000 abortions.

Performance of the abortion by a resident rather than an attending physician increased the risk of perforation (relative risk 5.5, 95% confidence interval 3.3 to 9.2). Use of laminaria for dilatation slightly reduced the risk, although this effect was not statistically significant (relative risk 0.17, 95% confidence interval 0.02 to 1.2). Among factors beyond control of the physician, significant risks were found with advancement of gestational age (relative risk 1.4, 95% confidence interval 1.2 to 1.7 for an increase of two additional weeks) and previous delivery (relative risk 3.4, 95% confidence interval 1.9 to 6.3). Use of laminaria and performance of the abortion by an attending physician produce a 33-fold protective effect against perforation as compared with the risk when a resident using rigid dilators performs an abortion (10).

V. DIVISION OF REPRODUCTIVE HEALTH PUBLICATIONS RELATED TO ABORTION

1979

American College of Obstetricians and Gynecologists. Methods of midtrimester abortion. Chicago: ACOG Technical Bulletin No. 56, December 1979 (Grimes D and Brenner WE, authors).

Cates W Jr. D&E after 12 weeks: safe or hazardous? Contemporary OB/GYN 1979;13:23-9.

Cates W Jr. Evaluating the quality of abortion services by measuring outcomes. Adv Planned Parenthood 1979;14:13-20.

Cates W Jr, Schulz KF, Gold J, Tyler CW Jr. Complications of surgical evacuation procedures for abortions after 12 weeks' gestation. In: Zatuchni GI, Sciarra JJ, Speidel JJ, eds. Pregnancy termination: procedures, safety and new developments. Maryland: Harper and Row, 1979:206-17.

Cates W Jr, Schulz KF, Grimes DA. Midtrimester abortion procedures. Letter - Am J Obstet Gynecol 1979;133:934-6.

Cates W Jr, Schulz KF, Grimes DA, Tyler CW Jr. Short-term complications of uterine evacuation techniques for abortion at 12 weeks' gestation or earlier. In: Zatuchni GI, Sciarra JJ, Speidel JJ, eds. Pregnancy termination: procedures, safety and new developments. Maryland: Harper and Row, 1979:127-35.

Centers for Disease Control. Health effects of restricting federal funds for abortion - United States. Morbidity Mortality Weekly Rep 1979;28:37-9.

Gold J, Cates W Jr. Restriction of federal funds for abortion: 18 months later. Am J Public Health 1979;69:929-30.

Gold J, Smith JC, Cates W Jr, Tyler CW Jr. The epidemiology of abortion in the United States. In: Zatuchni GI, Sciarra JJ, Speidel JJ, eds. Pregnancy termination: procedures, safety and new developments. Maryland: Harper and Row, 1979:387-93.

Grimes DA, Cates W Jr. The comparative efficacy and safety of intra-amniotic prostaglandin F2a and hypertonic saline for second-trimester abortion - a review and critique. J Reprod Med 1979;22:248-54.

Grimes DA, Cates W Jr. Complications from legally-induced abortion: a review. Obstet Gynecol Surv 1979;34:177-91.

Grimes DA, Cates W Jr, Ziskin LZ, Kreitzker MS, Gregory M. Maternal death at term as a late sequela of failed attempted abortion. Adv Planned Parenthood 1979;14:77-9.

Grimes DA, Schulz KF, Cates W Jr, Tyler CW Jr. Local versus general anesthesia: which is safer for performing suction curettage abortions? Am J Obstet Gynecol 1979;135:1030-5.

Guidotti RJ, Grimes DA, Cates W Jr. Amniotic-fluid embolism and abortion. Letter - Lancet 1979;II:911-2.

Rubin GL, Gold J, Cates W Jr. Response of low income women and abortion facilities to restriction of public funds for abortion: a study of a large metropolitan area. Am J Public Health 1979;69:948-50.

Speroff L, Cates W Jr, Anderson G, Barr M. Is there a best way to do midtrimester abortions? (Symposium) Contemporary OB/GYN 1979 May;13:106-41.

1980

Atrash HK, Allen DT, Rochat RW. Legal abortions in Tennessee 1974-1978. J Tenn Med Assoc 1980;73:855-63.

Burr WA, Schulz KF. Delayed abortion in an area of easy accessibility. JAMA 1980;244:44-8.

Cates W Jr. Adolescent abortions in the United States. J Adolesc Health Care 1980;1:18-25.

Cates W Jr. For a graduated scale of fees for legal abortion. Fam Plann Perspect 1980;12:219-221.

Cates W Jr. Graduated abortion fees: the debate continues. Letter - Fam Plann Perspect 1980;12:276-7.

Cates W Jr. The epidemiology of adolescent abortion: prevalence, dangers, impact on public health. Transitions 1981;4:2-4. Abstract.

Cates W Jr, Grimes DA, Tyler CW Jr. Safety of legal abortion. Letter - Lancet 1980;I:198-9.

Cates W Jr, Schulz KF. Oxytocin augmentation of second trimester abortion: safe or hazardous? Contraception 1980;22:513-25.

Cates W Jr, Schulz KF, Grimes DA. Dilatation and evacuation for induced abortion in developing countries: advantages and disadvantages. Stud Fam Plann 1980;11:128-33.

Cates W Jr, Schulz KF, Grimes DA, Tyler CW Jr. Response to Indian council of medical research studies of prostaglandin abortion. Letter - Contraception 1980;22:103-5.

Cates W Jr, Selik RM. Regulating abortion services. Letter - N Engl J Med 1980;302:350.

Cates W Jr, Smith JC. Mortality from legal abortion in the United States, 1972-1976. In: Keith LG, Kent DR, Brittain JR. The safety of fertility control. New York: Springer Publishing Company, Inc., 1980:211-9.

Centers for Disease Control. Effects of restricting federal funds for abortion - Texas. Morbidity Mortality Weekly Rep 1980;29:253-4.

Centers for Disease Control. Teenage childbearing and abortion patterns - United States, 1977. Morbidity Mortality Weekly Rep 1980;29:157-9.

Flavier JM, Chen CHC. Induced abortion in rural villages of Cavite, the Philippines: knowledge, attitudes and practices. Stud in Fam Plann 1980;11:65-71.

Gold J, Cates W Jr. Herbal abortifacients. JAMA 1980;243:1365-6.

Gold J, Cates W Jr, Nelson M, Kimball AM, Rochat RW, Chester DA, Tyler CW Jr. A cluster of septic complications associated with illegal induced abortions. Obstet Gynecol 1980;56:311-5.

Gold J, Schulz KF, Cates W Jr, Tyler CW Jr. The safety of laminaria and rigid dilators for cervical dilatation prior to suction curettage for first trimester abortion: a comparative analysis. In: Naftolin F, Stubblefield P, eds. Dilatation of the uterine cervix. New York: The Raven Press, 1980:363-70.

Grimes DA, Cates W Jr. Abortion: methods and complications. In: Hafez ESE, ed. Human reproduction: conception and contraception. Maryland: Harper & Row, 1980:796-813.

Grimes DA, Cates W Jr. Fatal myocarditis associated with abortion in early pregnancy. South Med J 1980;73:236-8.

Grimes DA, Cates W Jr. Gestational age limit for abortion by D & E. Letter - Obstet Gynecol 1980; 55:766-777.

Grimes DA, Cates W Jr. The brief for hypertonic saline. Contemporary OB/GYN 1980;15:29-38.

Grimes DA, Hulka JF. Midtrimester dilatation and evacuation abortion. South Med J 1980;73:448-51.

Grimes DA, Hulka JF, McCutchen ME. Midtrimester abortion by dilatation and evacuation versus intra-amniotic instillation of prostaglandin F_{2a}: A randomized clinical trial. Am J Obstet Gynecol 1980;137:785-90.

Grimes DA, Schulz KF, Cates W Jr, Tyler CW Jr. The safety of midtrimester abortion. In: Keith LG, Kent DR, Berger GS, Brittain JR. The safety of fertility control. New York: Springer Publishing Company, Inc., 1980:198-210.

Rochat RW, Cates W Jr. Sensitive questions about foreign aid for abortion. Letter - Hastings Center Report 1980;10:46.

Rochat RW, Kramer D, Senanayake P, Howell C. Induced abortion and health problems in developing countries. Letter - Lancet 1980;II:484.

Rubin GL, Cates W Jr, Gold J, Rochat RW, Tyler CW Jr. Fatal ectopic pregnancy after attempted legally induced abortion. JAMA 1980;244:1705-8.

Warren CW, Gold J, Tyler CW Jr, Smith JC, Paris AL. Seasonal variation in spontaneous abortions. Am J Public Health 1980;70:1297-9.

1981

Cates W Jr. Abortions for teenagers. In: Hodgson JE, ed. Abortion and sterilization: medical and social aspects. London: Academic Press, Inc., 1981:139-54.

Cates W Jr. Effect of the Hyde Amendment. Response--JAMA 1982;247:1128.

Cates W Jr. The epidemiology of adolescent abortion: prevalence, dangers, impact on public health. Transitions 1981;4(2):2-4.

Cates W Jr. The Hyde Amendment in action: how did the restriction of federal funds for abortion affect low-income women? JAMA 1981;246:1109-12.

Cates W Jr, Boyd C, Halvorson-Boyd G, Holck S, Gilchrist TF. Death from amniotic fluid embolism and disseminated intravascular coagulation after a curettage abortion. Am J Obstet Gynecol 1981;141:346-8.

- Cates W Jr, Grimes DA. Deaths from second trimester abortion by dilatation and evacuation: causes, prevention, facilities. *Obstet Gynecol* 1981;58:401-8.
- Cates W Jr, Grimes DA. Morbidity and mortality. In: Berger GS, Brenner WE, Keith L, eds. *Second trimester abortion: perspectives after a decade of experience*. Littleton, Mass.: PSG Publishing Company, 1981:163-78.
- Cates W Jr, Grimes DA. Morbidity and mortality of abortion in the United States. In: Hodgson JE, ed. *Abortion and sterilization: medical and social aspects*. London: Academic Press Inc., 1981:155-80.
- Cates W Jr, Grimes DA. Women obtaining abortion: a comparison between the United States and Canada. In: Sachdev P, ed. *Abortion: readings and research*. Toronto, Canada: Butterworths, 1981:125-33.
- Dorfman SF, Binkin N. When birth control fails: how to abort ourselves safely. (Book review) *N Engl J Med* 1981;305:1355-6.
- Grimes DA, Cates W Jr, Selik RM. Abortion facilities and the risk of death. *Fam Plann Perspect* 1981;13:30-2.
- Grimes DA, Cates W Jr. Dilatation and evacuation. In: Berger GS, Brenner WE, Keith L, eds. *Second trimester abortion: perspectives after a decade of experience*. Littleton, Mass.: PSG Publishing Company, 1981:119-33.
- Grimes DA, Cates W Jr, Selik RM. Abortion facilities and the risk of death. *Fam Plann Perspect* 1981;13:30-2.
- Grimes DA, Cates W Jr, Selik RM. Fatal septic abortion in the United States, 1975-1977. *Obstet Gynecol* 1981;57:739-44.
- Guidotti RJ, Grimes DA, Cates W Jr. Fatal amniotic fluid embolism during legally induced abortion, United States, 1972 to 1978. *Am J Obstet Gynecol* 1981;141:257-61.
- Measham AR, Rosenberg MJ, Khan AR, Obaidullah M, Rochat RW, Jabeen S. Complications from induced abortion in Bangladesh related to types of practitioner and methods, and impact on mortality. *Lancet* 1981;I:199-202.
- Peterson HB, Grimes DA, Cates W Jr, Rubin GL. Comparative risk of death from induced abortion at <12 weeks' gestation performed with local versus general anesthesia. *Am J Obstet Gynecol* 1981;141:763-8.
- Rochat RW, Jabeen S, Rosenberg MJ, Measham AR, Khan AR, Obaidullah M, Gould P. Maternal and abortion related deaths in Bangladesh, 1978-1979. *Int J Gynaecol Obstet* 1981;19:155-64.
- Rosenberg MJ, Rochat RW, Jabeen S, Measham AR, Obaidullah M, Khan AR. Attitudes of rural Bangladesh physicians toward abortion. *Stud Fam Plann* 1981;12:318-21.
- Rubin GL, Cates W Jr. Ultrasonography before abortion? Letter - *JAMA* 1981;246:1088-9.

Selik RM, Cates W Jr, Tyler CW Jr. Behavioral factors contributing to abortion deaths: a new approach to mortality studies. *Obstet Gynecol* 1981;58:631-5.

Selik RM, Cates W Jr, Tyler CW Jr. Effects of restricted public funding for legal abortions: a second look. *Am J Public Health* 1981;71:77-81.

Tyler, CW Jr. Epidemiology of abortion. *J Reprod Med* 1981;26:459-69.

Tyler CW Jr, Cates W Jr, Schulz KF, Selik RM, Smith JC. Second-trimester induced abortion in the United States. In: Berger GS, Brenner WE, Keith L, eds. Second trimester abortion: perspectives after a decade of experience. Littleton, Mass.: PSG Publishing Company, 1981:13-25.

1982

Atrash HK, Peterson HB, Cates W Jr, Grimes DA. The risk of death from combined abortion-sterilization procedures: can hysterotomy or hysterectomy be justified? *Am J Obstet Gynecol* 1982;142:269-76.

Binkin N, Gold J, Cates W Jr. Illegal-abortion deaths in the United States: why are they still occurring? *Fam Plann Perspect* 1982;14:163-7.

Cates W Jr. "Abortion myths and realities": Who is misleading whom? *Am J Obstet Gynecol* 1982;142:954-6.

Cates W Jr. Legal abortion: the public health record. *Science* 1982;215:1586-90.

Cates W Jr. What's the impact of restricted federal abortion funds--so far? *Contemporary OB/GYN* 1982;19(3):39-45.

Cates W Jr, Grimes DA. The trimester threshold for pregnancy termination: myth or truth? In: Keirse MJNC et al., eds. Second trimester pregnancy termination. The Hague: Leiden University Press, 1982:41-51.

Cates W Jr, Schulz KF, Grimes DA, Horowitz AJ, Lyon FA, Kravitz FH, Frisch MJ. Dilatation and evacuation procedures and second-trimester abortions. The role of physician skill and hospital setting. *JAMA* 1982;248:559-63.

Cates W Jr, Smith JC, Rochat RW, Grimes DA. Mortality from abortion and childbirth: are the statistics biased? *JAMA* 1982;248:192-6.

Dorfman SF. Abortion and sterilization: medical and social aspects. (Book review) *N Engl J Med* 1982;306:685-6.

Grimes DA, Cates W Jr. Instrumental abortion in the second trimester: an overview. In: Keirse MJNC et al., eds. Second trimester pregnancy termination. The Hague: Leiden University Press, 1982:65-79.

Hogue CJR, Cates W Jr, Tietze C. The effects of induced abortion on subsequent reproduction. *Epidemiologic Reviews* 1982;4:66-94.

LeBolt SA, Grimes DA, Cates, W Jr. Mortality from abortion and childbirth: are the populations comparable? JAMA 1982;248:188-91.

O'Reilly KR, Dorfman SF, Cates W Jr. The epidemiology of abortion services. Family and Community Health 1982;5:29-39.

1983

Akhter HH. Weighing risks against benefits in contraceptive safety. Draper Fund Report 1983; No. 12:20-21.

Binkin N, Mhango C, Cates W Jr, Slovis B, Freeman M. Women refused second-trimester abortion: correlates of pregnancy outcome. Am J Obstet Gynecol 1983;145:279-284.

Binkin NJ, Schulz KF, Grimes DA, Cates W Jr. Urea-prostaglandin versus hypertonic saline for instillation abortion. Am J Obstet Gynecol 1983;146:947-952.

Cates W Jr, Schulz KF, Grimes DA. Second-trimester abortions. Letter - JAMA 1983;249:588.

Cates W Jr, Schulz KF, Grimes DA. The risks associated with teenage abortion. N Engl J Med 1983;309:621-624.

Centers for Disease Control. Abortion surveillance: preliminary analysis, 1979-1980 - United States. Morbidity and Mortality Weekly Report 1983;32:62-65.

Centers for Disease Control. Abortion Surveillance Report, 1979-1980. Atlanta, Ga.: Centers for Disease Control, 1983.

Centers for Disease Control. Third-trimester induced abortion - Georgia, 1979 and 1980. Morbidity and Mortality Weekly Report 1983;32:246-247.

Dorfman SF. Deaths from ectopic pregnancy, United States, 1979 to 1980. Obstet Gynecol 1983;62:334-338.

Dorfman SF. Ectopic pregnancy surveillance. In: Surveillance summaries (published quarterly). February 1983;32:(Suppl. 1):19SS-21SS.

Grimes DA, Cates W Jr, Smith JC, RoCHAT RW. Mortality from abortion and childbirth. Response - JAMA 1983;249:194.

Grimes DA, Kafrissen ME, O'Reilly KR, Binkin NJ. Fatal hemorrhage from legal abortion in the United States. Surg Gynecol Obstet 1983;157:461-466.

Grimes DA, LeBolt SA, Cates W Jr. Mortality from abortion and childbirth. Letter - JAMA 1983;250:362.

Grimes DA, Tyler CW Jr. Controversies concerning midtrimester dilatation and evacuation abortion; In: Zuspan FP, Christian CD, eds. Reid's controversies in obstetrics and gynecology. New York: WB Saunders, 1983:386-392.

Hogue CJR, Cates W Jr, Tietze C. Impact of vacuum aspiration abortion on future childbearing: a review. Fam Plann Perspect 1983;15:119-126.

Lang PRH, Binkin NJ, Kaunitz AM, Kafrissen ME, Hogue CJR, Rhodenhiser EP. Abortion Surveillance, 1979-1980. In: Surveillance summaries (published quarterly). May 1983;32(Suppl. 2):1SS-7SS.

Schulz KF, Grimes DA, Cates W Jr. Measures to prevent cervical injury during suction curettage abortion. Lancet 1983;I:1182-1185.

Spitz AM, Lee NC, Grimes DA, Schoenbucher AK, Lavoie M. Third-trimester induced abortion in Georgia, 1979 and 1980. Am J Public Health 1983;73:594-595.

References

- 1) Henshaw SK, Forrest JD, Blaine E. Abortion services in the United States, 1981 and 1982. *Fam Plann Perspect* 1984; 16:119-127.
- 2) U.S. Bureau of the Census. Current population reports. Series P - 25, No. 949, Estimates of the Population of the United States by age, sex, and race: 1980 to 1983, U.S. Government Printing Office, Washington, D.C., 1984.
- 3) Zelnik M, Shah F. First intercourse among young Americans. *Fam Plann Perspect* 1983; 15:64-70.
- 4) National Center for Health Statistics: Advance report of final natality statistics, 1981. Monthly Vital Statistics Report Vol 32, No. 9 Supp DHHS Pub No. (PHS) 84-1120. Public Health Service, Hyattsville, Md.
- 5) Tietze C, Bongaarts J. Repeat abortion in the United States: new insights. *Fam Plann Perspect* 1982; 13:373-9.
- 6) Cates W Jr, Schulz KF, Grimes DA, Horowitz AJ, Lyon FA, Kravitz FH, Frisch MJ. Dilatation and evacuation procedures and second trimester abortions. *JAMA* 1982; 248:559-63.
- 7) Schulz KF, Grimes DA, Cates W Jr. Measures to prevent cervical injury during suction curettage abortion. *Lancet* 1983;1:1182-1185.
- 8) Binkin, NJ, Schulz KF, Grimes DA, Cates W Jr. Urea-prostaglandin versus hypertonic saline for instillation abortion. *Am J Obstet Gynecol* 1983; 146:947-952.
- 9) Kafrissen ME, Schulz KF, Grimes DA, Cates W Jr. Midtrimester abortion, intra-amniotic instillation of hyperosmolar urea and prostaglandin F₂(alpha) v dilatation and evacuation. *JAMA* 1984; 251:916-919.
- 10) Grimes DA, Schulz KF, Cates W Jr. Prevention of uterine perforation during curettage abortion. *JAMA* 1984; 251:2108-2111.

Table 1
Source of Abortion Reporting, Number of Reported Abortions, and
Abortion Ratio and Rate, by Year, United States, 1969-1981

	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980*</u>	<u>1981</u>
Number of reporting areas ¹ that report data through central health agency	8	18	19	21	26	37	39	41	46	48	47	47	46
Number of reporting areas that report data through hospitals and other medical facilities	2	7	7	8	26	15	13	11	6	4	5	5	6
Total number of abortions reported to CDC	22,670	193,491	485,816	586,760	615,831	763,476	854,853	988,267	1,079,430	1,157,776	1,251,921	1,297,606	1,300,760
Abortion ratio (abortions per 1,000 live births)	6.3	51.9	136.6	180.1	196.3	241.6	271.9	312.0	324.5	347.3	358.3	359.2	358.4
Abortion rate (abortions per 1,000 females aged 15-44)		5	11	13	14	17	18	21	22	23	24	25	24

¹The 52 reporting areas include 49 States, upstate New York, New York City, and the District of Columbia

*Updates information reported in the 1979-1980 Abortion Surveillance Report.

Table 2
Reported Number of Legal Abortions, and Abortion Ratios and Rates
by State of Occurrence, 1981

<u>State</u>	<u>Abortions</u> ¹	<u>Ratios</u> ²	<u>Rates</u> ³
Alabama	13,485 ⁴	219	15
Alaska	1,880 ⁵	186	18
Arizona	10,573	205	16
Arkansas	5,722	160	11
California	202,000	480	35
Colorado	17,240	331	23
Connecticut	16,565	414	23
Delaware	4,062	442	29
Dist. of Columbia	25,952	*	158
Florida	67,802	489	31
Georgia	31,894	355	24
Hawaii	6,692	368	29
Idaho	2,706	139	13
Illinois	68,290	369	25
Indiana	15,016	177	11
Iowa	6,288 ⁴	137	9
Kansas	10,448	254	19
Kentucky	10,230 ⁵	179	12
Louisiana	18,237	222	18
Maine	3,277	198	13
Maryland	27,855	452	26
Massachusetts	40,913	553	30
Michigan	45,787	326	20
Minnesota	18,304	267	19
Mississippi	5,561	120	10
Missouri	18,604	242	16
Montana	3,838	268	21
Nebraska	5,753	212	17
Nevada	7,259	503	37
New Hampshire	3,757 ⁴	278	17
New Jersey	29,254	304	17
New Mexico	5,194	196	17
New York	158,698	645	39
(City)	(101,880) ⁶	(939)	
(Upstate)	(56,818)	(414)	
North Carolina	32,050	383	23
North Dakota	2,554	206	18
Ohio	45,567	273	19
Oklahoma	10,327	193	16
Oregon	14,799	344	22
Pennsylvania	62,701	391	23
Rhode Island	7,515	605	36
South Carolina	12,496	241	15
South Dakota	1,579	124	10
Tennessee	21,911	327	21
Texas	85,755	305	25
Utah	3,842	93	11
Vermont	3,388	426	25
Virginia	32,037	404	25
Washington	30,978	444	30
West Virginia	2,640 ⁴	95	6
Wisconsin	20,819	280	19
Wyoming	666	61	6
Total	1,300,760	358	24

¹Abortion data from central health agency unless otherwise noted

²Abortions per 1,000 live births (live-birth data from central health agency except for Alabama, Alaska, Delaware, Iowa, Kentucky, New Hampshire, West Virginia, and Wisconsin. Live-birth data for these states from National Center for Health Statistics, Monthly Vital Statistics Report, Vol. 32, No. 9, Supplemental, December 29, 1983)

³Abortions per 1,000 females aged 15-44 (number of females aged 15-44 from Bureau of the Census, Current Population Survey, March 1981 Tape Technical Documentation, Washington: The Bureau, 1981).

⁴Reported from hospitals and/or other medical facilities in state

⁵Data from The Alan Guttmacher Institute

⁶Reported from New York City health department

*Greater than 1,000 abortions per 1,000 live births

Table 3
Reported Legal Abortions Obtained by Out-of-State Residents, 1981

State	Total Abortions Obtained	No. of Abortions for which Residence Status of Woman is Known ¹	No. of Abortions Obtained by Out-of-State Residents	Percentage of Abortions Obtained by Out-of-State Residents ²
Alabama ³	13,485	7,305	476	6.5
Alaska	1,880	—	—	—
Arizona	10,573	10,484	437	4.2
Arkansas	5,722	5,722	244	4.3
California ⁴	202,000	199,902	1,254	0.6
Colorado	17,240	15,102	1,302	8.6
Connecticut	16,565	16,283	270	1.7
Delaware	4,062	—	—	—
Dist. of Columbia	25,952	25,718	12,704	49.4
Florida	67,802	—	—	—
Georgia	31,894	31,894	3,062	9.6
Hawaii	6,692	6,690	73	1.1
Idaho	2,706	2,706	236	8.7
Illinois	68,290	67,937	2,752	4.1
Indiana	15,016	15,016	366	2.4
Iowa ³	6,288	5,094	485	9.5
Kansas	10,448	10,441	4,150	39.7
Kentucky	10,230	—	—	—
Louisiana	18,237	16,367	1,327	8.1
Maine	3,277	3,274	396	12.1
Maryland	27,855	27,854	1,616	5.8
Massachusetts	40,913	40,913	1,816	4.4
Michigan	45,787	45,787	1,756	3.8
Minnesota	18,304	18,274	2,453	13.4
Mississippi	5,561	5,561	295	5.3
Missouri	18,604	18,589	2,408	13.0
Montana	3,838	3,838	711	18.5
Nebraska	5,753	5,743	1,376	24.0
Nevada	7,259	7,259	1,171	16.1
New Hampshire ³	3,757	1,056	405	38.4
New Jersey	29,254	29,211	628	2.1
New Mexico	5,194	5,194	165	3.2
New York	158,698	158,595	12,938	8.2
(City)	(101,880)	(101,788)	(9,751)	(9.6)
(Upstate)	(56,818)	(56,807)	(3,187)	(5.6)
North Carolina	32,050	32,016	2,016	6.3
North Dakota	2,554	2,554	1,357	53.1
Ohio	45,567	44,355	2,369	5.3
Oklahoma	10,327	10,324	642	6.2
Oregon	14,799	13,284	848	6.4
Pennsylvania	62,701	62,701	3,881	6.2
Rhode Island	7,515	7,515	1,884	25.1
South Carolina	12,496	12,494	689	5.5
South Dakota	1,579	1,574	454	28.8
Tennessee	21,911	21,901	4,157	19.0
Texas	85,755	85,755	6,762	7.9
Utah	3,842	3,838	262	6.8
Vermont	3,388	3,388	826	24.4
Virginia	32,037	32,037	1,871	5.8
Washington	30,978	30,960	2,706	8.7
West Virginia ³	2,640	2,640	403	15.3
Wisconsin	20,819	—	—	—
Wyoming	666	—	—	—
Total	1,300,760	1,175,145	88,399	7.5

¹Refers to in-state and out-of-state residence status

²Based on number of abortions for which residence status of woman is known

³Abortions for 1981 are reported from hospitals and/or other medical facilities in state. Residence data are based on percentages and actual numbers as reported by hospitals and/or other medical facilities in the state.

⁴Distribution based on data from state health department survey of hospitals and clinics, applied to total abortions reported

—Not available

Table 4
Reported Legal Abortions by State of Residence,* 1981

State of Residence by Census Division	Abortions Obtained Within State of Residence		Abortions Obtained Outside State of Residence		Total
	No.	%	No.	%	
NEW ENGLAND	(66,832)	(94.4)	(4,000)	(5.6)	(70,832)
Maine	2,878	92.9	219	7.1	3,097
New Hampshire	651 ¹	83.2	131	16.8	782
Vermont	2,562	96.6	91	3.4	2,653
Massachusetts	39,097	94.5	2,281	5.5	41,378
Rhode Island	5,631	98.4	93	1.6	5,724
Connecticut	16,013	93.1	1,185	6.9	17,198
MIDDLE ATLANTIC	(237,139)	(96.1)	(9,558)	(3.9)	(246,697)
New York	149,736	99.0	1,500	1.0	151,236
New Jersey	28,583	84.8	5,134	15.2	33,717
Pennsylvania	58,820	95.3	2,924	4.7	61,744
EAST NORTH CENTRAL	(186,671)	(96.2)	(7,314)	(3.8)	(193,985)
Ohio	41,986	97.7	984	2.3	42,970
Indiana	14,650	90.4	1,554	9.6	16,204
Illinois	65,185	96.0	2,747	4.0	67,932
Michigan	44,031	99.0	433	1.0	44,464
Wisconsin	20,819 ²	92.9	1,596	7.1	22,415
WEST NORTH CENTRAL	(49,586)	(84.8)	(8,899)	(15.2)	(58,485)
Minnesota	15,821	97.0	497	3.0	16,318
Iowa	4,609 ¹	73.9	1,631	26.1	6,240
Missouri	16,181	77.4	4,726	22.6	20,907
North Dakota	1,197	76.3	372	23.7	1,569
South Dakota	1,120	63.5	644	36.5	1,764
Nebraska	4,367	92.6	350	7.4	4,717
Kansas	6,291	90.3	679	9.7	6,970
SOUTH ATLANTIC	(214,156)	(90.5)	(22,403)	(9.5)	(236,559)
Delaware	4,062 ²	87.3	590	12.7	4,652
Maryland	26,238	73.8	9,313	26.2	35,551
Dist. of Columbia	13,014	95.9	561	4.1	13,575
Virginia	30,166	86.1	4,857	13.9	35,023
West Virginia	2,237 ¹	49.1	2,316	50.9	4,553
North Carolina	30,000	95.1	1,558	4.9	31,558
South Carolina	11,805	84.3	2,191	15.7	13,996
Georgia	28,832	97.9	626	2.1	29,458
Florida	67,802 ²	99.4	391	0.6	68,193
EAST SOUTH CENTRAL	(40,069)	(86.7)	(6,154)	(13.3)	(46,223)
Kentucky	10,230 ²	82.1	2,226	17.9	12,456
Tennessee	17,744	95.4	854	4.6	18,598
Alabama	6,829 ¹	86.0	1,116	14.0	7,945
Mississippi	5,266	72.9	1,958	27.1	7,224
WEST SOUTH CENTRAL	(109,193)	(96.3)	(4,164)	(3.7)	(113,357)
Arkansas	5,478	78.6	1,492	21.4	6,970
Louisiana	15,040	93.4	1,066	6.6	16,106
Oklahoma	9,682	94.6	554	5.4	10,236
Texas	78,993	98.7	1,052	1.3	80,045

Table 4 (Continued)
Reported Legal Abortions by State of Residence,* 1981

State of Residence by Census Division	Abortions Obtained Within State of Residence		Abortions Obtained Outside State of Residence		Total
	No.	%	No.	%	
MOUNTAIN	(44,803)	(92.0)	(3,902)	(8.0)	(48,705)
Montana	3,127	94.9	168	5.1	3,295
Idaho	2,470	79.8	627	20.2	3,097
Wyoming	666 ²	38.4	1,069	61.6	1,735
Colorado	13,800	99.1	129	0.9	13,929
New Mexico	5,029	81.1	1,172	18.9	6,201
Arizona	10,047	96.5	363	3.5	10,410
Utah	3,576	96.3	138	3.7	3,714
Nevada	6,088	96.3	236	3.7	6,324
PACIFIC	(247,835)	(99.1)	(2,318)	(0.9)	(250,153)
Washington	28,254	97.0	873	3.0	29,127
Oregon	12,436	93.8	820	6.2	13,256
California	198,648 ³	99.9	250	0.1	198,898
Alaska	1,880 ²	84.0	357	16.0	2,237
Hawaii	6,617	99.7	18	0.3	6,635
TOTAL	1,196,284 ⁴	94.6	68,712	5.4	1,264,996 ⁵

¹Abortions reported from hospitals and/or other medical facilities in state. Residence data based on percentages and actual numbers as reported by hospitals and/or other medical facilities in state

²Residence information not available. All abortions reported are assumed to have been obtained by residents of the state.

³Distribution of data from state health department survey of hospitals and clinics, partial year reporting, applied to total abortions reported

⁴Total number of abortions performed in state of residence is greater than total number of abortions with residence known shown on Table 3 because data from the 6 states for which residence status was unknown (see Table 3) are included in Table 4, with all abortions assumed to have been obtained by residents of the state (see footnote 2).

⁵Does not agree with Table 1 because abortions with state of residence unknown are excluded

*Excludes 35,764 abortions with state of residence unknown (6,567 out-of-country residents were classified as state of residence unknown)

Table 5
Reported Legal Abortions by Age and State of Occurrence,
Selected States,* 1981

State	<15		15-19		20-24		25-29		30-34		35-39		>40		Unknown		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
AZ	60	0.6	2,946	27.9	3,878	36.7	2,050	19.4	870	8.2	302	2.9	74	0.7	393	3.7	10,573	100.0
AR	76	1.3	1,963	34.3	1,857	32.5	987	17.2	507	8.9	245	4.3	86	1.5	1	0.0	5,722	100.0
CA ¹	2,048	1.0	53,548	26.5	66,423	32.9	39,655	19.6	22,236	11.0	8,815	4.4	2,856	1.4	6,419	3.2	202,000	100.0
CO	111	0.6	4,283	24.8	5,589	32.4	2,942	17.1	1,445	8.4	512	3.0	167	1.0	2,191	12.7	17,240	100.0
CT	131	0.8	4,742	28.6	5,861	35.4	3,130	18.9	1,558	9.4	737	4.4	236	1.4	170	1.0	16,565	100.0
DC	291	1.1	5,694	21.9	8,944	34.5	5,764	22.2	3,224	12.4	1,404	5.4	382	1.5	249	1.0	25,952	100.0
GA	390	1.2	9,100	28.5	10,893	34.2	6,508	20.4	3,268	10.2	1,312	4.1	422	1.3	1	0.0	31,894	100.0
HI	33	0.5	1,458	21.8	2,329	34.8	1,554	23.2	819	12.2	366	5.5	126	1.9	7	0.1	6,692	100.0
ID	20	0.7	811	30.0	986	36.4	505	18.7	225	8.3	110	4.1	33	1.2	16	0.6	2,706	100.0
IL	364	0.5	14,183	20.8	23,001	33.7	14,708	21.5	7,882	11.5	3,774	5.5	1,524	2.2	2,854	4.2	68,290	100.0
IN	157	1.0	4,487	29.9	5,358	35.7	2,735	18.2	1,303	8.7	591	3.9	185	1.2	200	1.3	15,016	100.0
KS	93	0.9	3,601	34.5	3,613	34.6	1,719	16.5	899	8.6	372	3.6	145	1.4	6	0.1	10,448	100.0
LA	152	0.8	4,148	22.7	5,675	31.1	3,556	19.5	1,738	9.5	737	4.0	210	1.2	2,021	11.1	18,237	100.0
ME	22	0.7	929	28.3	1,196	36.5	613	18.7	319	9.7	133	4.1	40	1.2	25	0.8	3,277	100.0
MD	390	1.4	8,875	31.9	9,908	35.6	4,931	17.7	2,494	9.0	947	3.4	310	1.1	0	0.0	27,855	100.0
MA	202	0.5	10,179	24.9	15,627	38.2	8,513	20.8	4,131	10.1	1,723	4.2	502	1.2	36	0.1	40,913	100.0
MI	586	1.3	13,540	29.6	16,131	35.2	8,809	19.2	4,356	9.5	1,753	3.8	517	1.1	95	0.2	45,787	100.0
MN	105	0.6	5,681	31.0	6,989	38.2	3,196	17.5	1,491	8.1	621	3.4	210	1.1	11	0.1	18,304	100.0
MS	91	1.6	1,702	30.6	1,912	34.4	1,042	18.7	520	9.4	221	4.0	70	1.3	3	0.1	5,561	100.0
MO	209	1.1	5,507	29.6	6,425	34.5	3,578	19.2	1,849	9.9	770	4.1	261	1.4	5	0.0	18,604	100.0
MT	18	0.5	1,050	27.4	1,427	37.2	819	21.3	359	9.4	123	3.2	42	1.1	0	0.0	3,838	100.0
NB	41	0.7	1,855	32.2	2,135	37.1	955	16.6	448	7.8	226	3.9	93	1.6	0	0.0	5,753	100.0
NV	51	0.7	1,996	27.5	2,476	34.1	1,565	21.6	823	11.3	258	3.6	90	1.2	0	0.0	7,259	100.0
NJ	304	1.0	7,292	24.9	10,179	34.8	5,764	19.7	3,449	11.8	1,680	5.7	576	2.0	10	0.0	29,254	100.0
NM	43	0.8	1,421	27.4	1,804	34.8	1,088	20.9	539	10.4	215	4.1	68	1.3	16	0.3	5,194	100.0
NY	1,352	0.9	37,445	23.6	53,721	33.9	33,468	21.1	19,675	12.4	9,162	5.8	2,753	1.7	1,122	0.7	158,698	100.0
(City)	(929)	(0.9)	(20,568)	(20.2)	(33,595)	(33.0)	(23,709)	(23.3)	(14,121)	(13.9)	(6,405)	(6.3)	(1,821)	(1.8)	(732)	(0.7)	(101,880)	(100.0)
(Ups.)	(423)	(0.7)	(16,877)	(29.7)	(20,126)	(35.4)	(9,759)	(17.2)	(5,554)	(9.8)	(2,757)	(4.9)	(932)	(1.6)	(390)	(0.7)	(56,818)	(100.0)
NC	441	1.4	10,074	31.4	11,380	35.5	5,765	18.0	2,786	8.7	1,127	3.5	335	1.0	142	0.4	32,050	100.0
ND	14	0.5	903	35.4	934	36.6	375	14.7	196	7.7	91	3.6	41	1.6	0	0.0	2,554	100.0
OH	266	0.6	10,723	23.5	17,001	37.3	9,280	20.4	4,496	9.9	1,908	4.2	771	1.7	1,122	2.5	45,567	100.0
OK	105	1.0	3,103	30.0	3,698	35.8	1,962	19.0	908	8.8	395	3.8	138	1.3	18	0.2	10,327	100.0
OR	93	0.6	4,042	27.3	4,538	30.7	2,664	18.0	1,285	8.7	496	3.4	140	0.9	1,541	10.4	14,799	100.0
PA	636	1.0	17,688	28.2	23,513	37.5	11,777	18.8	5,865	9.4	2,400	3.8	748	1.2	74	0.1	62,701	100.0
RI	25	0.3	2,263	30.1	2,737	36.4	1,391	18.5	655	8.7	329	4.4	114	1.5	1	0.0	7,515	100.0
SC	152	1.2	3,805	30.4	4,399	35.2	2,307	18.5	1,171	9.4	505	4.0	140	1.1	17	0.1	12,496	100.0
SD	9	0.6	535	33.9	518	32.8	260	16.5	141	8.9	53	3.4	26	1.6	37	2.3	1,579	100.0
TN	244	1.1	6,600	30.1	7,581	34.6	4,200	19.2	2,039	9.3	930	4.2	280	1.3	37	0.2	21,911	100.0
UT ²	22	0.6	883	24.7	1,320	36.9	757	21.2	390	10.9	127	3.6	53	1.5	24	0.7	3,576	100.0
VT	19	0.6	1,011	29.8	1,292	38.1	565	16.7	331	9.8	138	4.1	31	0.9	1	0.0	3,388	100.0
VA	373	1.2	9,516	29.7	11,164	34.8	6,080	19.0	3,125	9.8	1,322	4.1	408	1.3	49	0.2	32,037	100.0
WA	224	0.7	8,754	28.3	10,886	35.1	6,405	20.7	3,112	10.0	1,170	3.8	352	1.1	75	0.2	30,978	100.0
WY	6	0.9	180	27.0	270	40.5	122	18.3	48	7.2	30	4.5	9	1.4	1	0.2	666	100.0
Total	9,969	0.9	288,516	26.6	375,568	34.7	214,064	19.8	112,975	10.4	48,130	4.4	15,564	1.4	18,990	1.8	1,083,776	100.0
Abortion ratio ³	1,393		716		398		239		240		404		789				372	

¹Distribution based on data from state health department survey of hospitals and clinics, applied to total abortions reported

²Residents only

³Calculated as the number of legal abortions obtained by women in a given age group per 1,000 live births to women in the same age group. "Unknown" age for each state is distributed according to known age distribution for that state.

*All states for which data are available (40 States and the District of Columbia)

Table 6
Reported Legal Abortions Obtained by Teenagers,
Selected States,* 1981

State	<15	15	16	17	18	19	Total
Arizona	60	155	387	599	834	971	3,006
Arkansas	76	150	307	388	594	524	2,039
California ¹	2,048	3,948	7,984	11,125	14,725	15,766	55,596
Colorado	111	243	535	880	1,284	1,341	4,394
Connecticut	131	266	666	1,011	1,406	1,393	4,873
Georgia	390	677	1,331	1,849	2,559	2,684	9,490
Idaho	20	53	93	160	254	251	831
Indiana	157	314	672	914	1,303	1,284	4,644
Kansas	93	263	546	735	1,028	1,029	3,694
Louisiana	152	286	490	798	1,316	1,258	4,300
Maine	22	64	124	183	272	286	951
Massachusetts	202	490	1,076	1,597	3,382	3,634	10,381
Minnesota	105	303	694	1,077	1,757	1,850	5,786
Mississippi	91	138	213	366	523	462	1,793
Missouri	209	410	826	1,103	1,598	1,570	5,716
Nebraska	41	107	260	367	576	545	1,896
New Mexico	43	69	199	301	447	405	1,464
New York	1,352	2,565	4,811	7,495	11,239	11,335	38,797
(City)	(929)	(1,685)	(2,735)	(4,141)	(5,886)	(6,121)	(21,497)
(Upstate)	(423)	(880)	(2,076)	(3,354)	(5,353)	(5,214)	(17,300)
North Carolina	441	736	1,429	2,063	3,001	2,845	10,515
North Dakota	14	41	112	153	313	284	917
Ohio	266	492	1,141	2,130	3,152	3,808	10,989
Oklahoma	105	213	423	542	1,047	878	3,208
Oregon	93	273	592	916	1,133	1,128	4,135
Pennsylvania	636	1,261	2,400	3,786	4,986	5,255	18,324
Rhode Island	25	88	315	561	624	675	2,288
South Carolina	152	240	596	849	1,051	1,069	3,957
South Dakota	9	34	61	118	151	171	544
Tennessee	244	462	905	1,263	1,970	2,000	6,844
Vermont	19	59	117	195	314	326	1,030
Virginia	373	706	1,336	1,908	2,851	2,715	9,889
Washington	224	555	1,290	1,766	2,584	2,559	8,978
Wyoming	6	19	27	32	49	53	186
Total	7,910	15,680	31,958	47,230	68,323	70,354	241,455
% Distribution	3.3	6.5	13.2	19.6	28.3	29.1	100.0
Abortion ratio ²	1,397	1,008	882	753	746	584	727

¹Distribution based on data from state health department survey of hospitals and clinics, applied to total abortions reported

²Calculated as the number of legal abortions obtained by women of a given age per 1,000 live births to women of the same age. "Unknown" age for each state is distributed according to known age distribution for that state.

*All states for which data are available (32)

Table 7
Reported Legal Abortions by Race and State of Occurrence,
Selected States,* 1981

State	White		Black & Other		Unknown		Total	
	No.	%	No.	%	No.	%	No.	%
Arizona	8,691	82.2	1,310	12.4	572	5.4	10,573	100.0
Arkansas	4,289	75.0	1,431	25.0	2	0.0	5,722	100.0
California ¹	129,137	63.9	50,069	24.8	22,794	11.3	202,000	100.0
Colorado	9,551	55.4	1,026	6.0	6,663	38.6	17,240	100.0
Dist. of Columbia	8,590	33.1	16,542	63.7	820	3.2	25,952	100.0
Georgia	19,429	60.9	12,465	39.1	0	0.0	31,894	100.0
Hawaii	2,261	33.8	4,215	63.0	216	3.2	6,692	100.0
Idaho	2,542	93.9	103	3.8	61	2.3	2,706	100.0
Illinois	44,234	64.8	20,958	30.7	3,098	4.5	68,290	100.0
Indiana	11,941	79.5	2,840	18.9	235	1.6	15,016	100.0
Kansas	9,067	86.8	1,344	12.9	37	0.4	10,448	100.0
Louisiana	8,479	46.5	6,436	35.3	3,322	18.2	18,237	100.0
Maine	3,218	98.2	32	1.0	27	0.8	3,277	100.0
Maryland	15,521	55.7	9,942	35.7	2,392	8.6	27,855	100.0
Minnesota	16,523	90.3	1,481	8.1	300	1.6	18,304	100.0
Mississippi	3,236	58.2	2,263	40.7	62	1.1	5,561	100.0
Missouri	13,027	70.0	5,488	29.5	89	0.5	18,604	100.0
Montana	3,513	91.5	187	4.9	138	3.6	3,838	100.0
Nevada	6,292	86.7	967	13.3	0	0.0	7,259	100.0
New Jersey	17,215	58.8	11,308	38.7	731	2.5	29,254	100.0
New Mexico	4,721	90.9	446	8.6	27	0.5	5,194	100.0
New York	99,470	62.7	57,116	36.0	2,112	1.3	158,698	100.0
(City)	(53,382)	(52.4)	(47,787)	(46.9)	(711)	(0.7)	(101,880)	(100.0)
(Upstate)	(46,088)	(81.1)	(9,329)	(16.4)	(1,401)	(2.5)	(56,818)	(100.0)
North Carolina	19,954	62.3	11,493	35.9	603	1.9	32,050	100.0
North Dakota	2,405	94.2	138	5.4	11	0.4	2,554	100.0
Ohio	29,473	64.7	10,677	23.4	5,417	11.9	45,567	100.0
Oklahoma	8,383	81.2	1,865	18.1	79	0.8	10,327	100.0
Oregon	12,570	84.9	678	4.6	1,551	10.5	14,799	100.0
Rhode Island	6,701	89.2	619	8.2	195	2.6	7,515	100.0
South Carolina	7,747	62.0	4,734	37.9	15	0.1	12,496	100.0
South Dakota	1,381	87.5	188	11.9	10	0.6	1,579	100.0
Tennessee	16,596	75.7	5,289	24.1	26	0.1	21,911	100.0
Utah ²	3,141	87.8	362	10.1	73	2.0	3,576	100.0
Vermont	3,333	98.4	40	1.2	15	0.4	3,388	100.0
Virginia	22,026	68.8	10,011	31.2	0	0.0	32,037	100.0
Washington	22,370	72.2	3,127	10.1	5,481	17.7	30,978	100.0
Total	597,027	65.5	257,190	28.2	57,174	6.3	911,391	100.0
Abortion ratio ³	329		549				375	

¹Distribution based on data from state health department survey of hospitals and clinics, applied to total abortions reported

²Residents only

³Calculated as the number of legal abortions obtained by women of a given race per 1,000 live births to women of the same race. "Unknown" race for each state is distributed according to known race distribution for that state. Excludes states reporting race "unknown" for more than 15% of abortions.

*All states for which data are available (34 States and the District of Columbia)

Table 8
Reported Legal Abortions by Marital Status
and State of Occurrence, Selected States,* 1981

State	Married		Unmarried ¹		Unknown		Total	
	No.	%	No.	%	No.	%	No.	%
Arizona	1,958	18.5	8,108	76.7	507	4.8	10,573	100.0
Arkansas	1,412	24.7	4,299	75.1	11	0.2	5,722	100.0
California ²	36,861	18.2	139,737	69.2	25,402	12.6	202,000	100.0
Colorado	3,047	17.7	11,052	64.1	3,141	18.2	17,240	100.0
Dist. of Columbia	5,787	22.3	18,621	71.8	1,544	5.9	25,952	100.0
Georgia	7,286	22.8	24,276	76.1	332	1.0	31,894	100.0
Hawaii ³	1,917	28.6	4,626	69.1	149	2.2	6,692	100.0
Idaho	632	23.4	2,024	74.8	50	1.8	2,706	100.0
Illinois	14,760	21.6	51,907	76.0	1,623	2.4	68,290	100.0
Indiana	3,024	20.1	11,343	75.5	649	4.3	15,016	100.0
Kansas	2,343	22.4	8,086	77.4	19	0.2	10,448	100.0
Louisiana	3,459	19.0	11,690	64.1	3,088	16.9	18,237	100.0
Maine	732	22.3	2,492	76.0	53	1.6	3,277	100.0
Maryland	6,286	22.6	21,037	75.5	532	1.9	27,855	100.0
Michigan ⁴	8,549	19.4	35,095	79.7	387	0.9	44,031	100.0
Minnesota	3,204	17.5	14,516	79.3	584	3.2	18,304	100.0
Mississippi	1,263	22.7	4,229	76.0	69	1.2	5,561	100.0
Missouri	4,080	21.9	14,457	77.7	67	0.4	18,604	100.0
Montana	738	19.2	2,964	77.2	136	3.5	3,838	100.0
Nevada	1,864	25.7	5,374	74.0	21	0.3	7,259	100.0
New Jersey	8,195	28.0	20,462	69.9	597	2.0	29,254	100.0
New Mexico	1,167	22.5	3,981	76.6	46	0.9	5,194	100.0
New York	33,248	21.0	123,295	77.7	2,155	1.4	158,698	100.0
(City)	(24,834)	(24.4)	(74,891)	(73.5)	(2,155)	(2.1)	(101,880)	(100.0)
(Upstate)	(8,414)	(14.8)	(48,404)	(85.2)	(0)	(0.0)	(56,818)	(100.0)
North Carolina	8,723	27.2	22,311	69.6	1,016	3.2	32,050	100.0
North Dakota	472	18.5	2,064	80.8	18	0.7	2,554	100.0
Ohio	9,785	21.5	34,875	76.5	907	2.0	45,567	100.0
Oklahoma	2,651	25.7	7,614	73.7	62	0.6	10,327	100.0
Oregon	3,156	21.3	9,914	67.0	1,729	11.7	14,799	100.0
Rhode Island	1,650	22.0	5,759	76.6	106	1.4	7,515	100.0
South Carolina	3,007	24.1	9,469	75.8	20	0.2	12,496	100.0
South Dakota	323	20.5	1,235	78.2	21	1.3	1,579	100.0
Tennessee	5,462	24.9	16,335	74.6	114	0.5	21,911	100.0
Utah ⁴	805	22.5	2,757	77.1	14	0.4	3,576	100.0
Vermont	661	19.5	2,667	78.7	60	1.8	3,388	100.0
Virginia ³	5,963	18.6	26,074	81.4	0	0.0	32,037	100.0
Total	194,470	21.0	684,745	74.1	45,229	4.9	924,444	100.0
Abortion ratio ⁵	102		1,452				371	

¹Includes women who never married, and widowed and divorced women

²Distribution based on data from state health department survey of hospitals and clinics, applied to total abortions reported. "Unmarried" includes separated women.

³Legitimate and illegitimate

⁴Residents only

⁵Calculated as the number of legal abortions obtained by women of a given marital status per 1,000 live births to women of the same marital status. "Unknown" marital status for each state is distributed according to known marital status distribution for that state. Excludes states reporting "unknown" marital status for more than 15% of abortions

*All states for which data are available (34 States and the District of Columbia)

Table 9
Reported Legal Abortions by Number of Live Births
and State of Occurrence, Selected States,* 1981

State	0		1		2		3		>4		Unknown		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Arizona	4,950	46.8	1,948	18.4	1,193	11.3	433	4.1	277	2.6	1,772	16.8	10,573	100.0
Colorado	10,017	58.1	2,357	13.7	1,502	8.7	521	3.0	291	1.7	2,552	14.8	17,240	100.0
Georgia	19,233	60.3	6,390	20.0	4,084	12.8	1,474	4.6	713	2.2	0	0.0	31,894	100.0
Hawaii	3,537	52.9	1,151	17.2	855	12.8	307	4.6	195	2.9	647	9.7	6,692	100.0
Idaho	1,698	62.7	447	16.5	305	11.3	127	4.7	66	2.4	63	2.3	2,706	100.0
Illinois	37,536	55.0	13,309	19.5	10,012	14.7	4,182	6.1	2,898	4.2	353	0.5	68,290	100.0
Indiana	8,269	55.1	2,873	19.1	1,999	13.3	744	5.0	363	2.4	768	5.1	15,016	100.0
Kansas	6,608	63.2	1,763	16.9	1,227	11.7	487	4.7	320	3.1	43	0.4	10,448	100.0
Maine	2,086	63.7	572	17.5	384	11.7	110	3.4	64	2.0	61	1.9	3,277	100.0
Maryland	17,172	61.6	5,783	20.8	3,126	11.2	980	3.5	466	1.7	328	1.2	27,855	100.0
Michigan ^{1,2}	23,366	53.1	9,526	21.6	6,745	15.3	2,707	6.1	1,519	3.4	168	0.4	44,031	100.0
Minnesota	13,010	71.1	2,637	14.4	1,680	9.2	630	3.4	347	1.9	0	0.0	18,304	100.0
Mississippi	2,995	53.9	1,194	21.5	792	14.2	344	6.2	233	4.2	3	0.1	5,561	100.0
Missouri	10,190	54.8	3,859	20.7	2,643	14.2	1,133	6.1	621	3.3	158	0.8	18,604	100.0
Montana	2,595	67.6	637	16.6	396	10.3	133	3.5	77	2.0	0	0.0	3,838	100.0
Nebraska	3,746	65.1	902	15.7	649	11.3	293	5.1	163	2.8	0	0.0	5,753	100.0
New Jersey	15,591	53.3	5,794	19.8	4,585	15.7	1,836	6.3	887	3.0	561	1.9	29,254	100.0
New Mexico	3,074	59.2	1,106	21.3	626	12.1	229	4.4	149	2.9	10	0.2	5,194	100.0
New York	85,963	54.2	31,464	19.8	24,693	15.6	10,155	6.4	6,422	4.0	1	0.0	158,698	100.0
(City)	(46,677)	(45.8)	(24,131)	(23.7)	(18,462)	(18.1)	(7,621)	(7.5)	(4,989)	(4.9)	(0)	(0.0)	(101,880)	(100.0)
(Upstate)	(39,286)	(69.1)	(7,333)	(12.9)	(6,231)	(11.0)	(2,534)	(4.5)	(1,433)	(2.5)	(1)	(0.0)	(56,818)	(100.0)
N. Carolina	17,886	55.8	6,585	20.5	3,896	12.2	1,393	4.3	730	2.3	1,560	4.9	32,050	100.0
North Dakota	1,840	72.0	316	12.4	237	9.3	83	3.2	78	3.1	0	0.0	2,554	100.0
Ohio ³	27,246	59.8	8,932	19.6	6,032	13.2	2,284	5.0	1,061	2.3	12	0.0	45,567	100.0
Oklahoma	5,806	56.2	2,201	21.3	1,518	14.7	498	4.8	304	2.9	0	0.0	10,327	100.0
Oregon ³	8,485	57.3	2,459	16.6	1,594	10.8	487	3.3	230	1.6	1,544	10.4	14,799	100.0
Rhode Island	4,933	65.6	1,207	16.1	840	11.2	292	3.9	149	2.0	94	1.3	7,515	100.0
S. Carolina ³	7,338	58.7	2,594	20.8	1,599	12.8	595	4.8	346	2.8	24	0.2	12,496	100.0
South Dakota	977	61.9	246	15.6	193	12.2	82	5.2	55	3.5	26	1.6	1,579	100.0
Tennessee	13,027	59.5	4,484	20.5	2,797	12.8	995	4.5	520	2.4	88	0.4	21,911	100.0
Utah ¹	2,057	57.5	690	19.3	467	13.1	210	5.9	132	3.7	20	0.6	3,576	100.0
Vermont	2,527	74.6	396	11.7	280	8.3	95	2.8	53	1.6	37	1.1	3,388	100.0
Virginia	19,823	61.9	6,059	18.9	3,853	12.0	1,242	3.9	603	1.9	457	1.4	32,037	100.0
Washington	17,874	57.7	5,390	17.4	3,486	11.3	1,199	3.9	563	1.8	2,466	8.0	30,978	100.0
Wyoming	414	62.2	107	16.1	89	13.4	31	4.7	19	2.9	6	0.9	666	100.0
Total	401,869	57.2	135,378	19.3	94,377	13.4	36,311	5.2	20,914	3.0	13,822	2.0	702,671	100.0
Abortion ratio ⁴	470		208		305		311		249				342	

¹Residents only

²Number of previous pregnancies carried to term

³Number of living children

⁴Calculated as the number of legal abortions obtained by women with n live births per 1,000 live births to women with n live births. "Unknown" live births for each state are distributed according to distribution of known live births. Excludes states reporting number of live births "unknown" for more than 15% of abortions

*All states for which data are available (33)

Table 10
Reported Legal Abortions by Number of Previous Induced Abortions,
Selected States,* 1981

State	0		1		2		≥3		Unknown		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Arizona	5,487	51.9	2,375	22.5	543	5.1	173	1.6	1,995	18.9	10,573	100.0
Colorado	10,307	59.8	3,458	20.1	802	4.7	243	1.4	2,430	14.1	17,240	100.0
Dist. of Columbia	13,494	52.0	6,128	23.6	2,476	9.5	1,136	4.4	2,718	10.5	25,952	100.0
Georgia	22,449	70.4	7,343	23.0	1,623	5.1	479	1.5	0	0.0	31,894	100.0
Hawaii	4,024	60.1	1,197	17.9	485	7.2	276	4.1	710	10.6	6,692	100.0
Idaho	1,926	71.2	574	21.2	125	4.6	37	1.4	44	1.6	2,706	100.0
Illinois	45,568	66.7	16,745	24.5	4,135	6.1	1,488	2.2	354	0.5	68,290	100.0
Indiana	10,532	70.1	2,770	18.4	612	4.1	187	1.2	915	6.1	15,016	100.0
Kansas	7,690	73.6	2,176	20.8	412	3.9	121	1.2	49	0.5	10,448	100.0
Maine	2,263	69.1	712	21.7	176	5.4	126	3.8	0	0.0	3,277	100.0
Maryland	17,244	61.9	7,262	26.1	2,198	7.9	831	3.0	320	1.1	27,855	100.0
Michigan ¹	28,424	64.6	10,567	24.0	4,814 ²	10.9	-- ²	--	226	0.5	44,031	100.0
Minnesota	13,694	74.8	3,642	19.9	755	4.1	213	1.2	0	0.0	18,304	100.0
Mississippi	4,548	81.8	828	14.9	142	2.6	40	0.7	3	0.1	5,561	100.0
Missouri	12,977	69.8	4,030	21.7	1,017	5.5	332	1.8	248	1.3	18,604	100.0
Montana	2,917	76.0	717	18.7	168	4.4	36	0.9	0	0.0	3,838	100.0
Nebraska	5,318	92.4	353	6.1	58	1.0	12	0.2	12	0.2	5,753	100.0
Nevada	4,089	56.3	2,078	28.6	733	10.1	359	4.9	0	0.0	7,259	100.0
New Jersey	17,339	59.3	7,643	26.1	2,453	8.4	927	3.2	892	3.0	29,254	100.0
New Mexico	3,517	67.7	1,177	22.7	333	6.4	138	2.7	29	0.6	5,194	100.0
New York	82,801	52.2	40,671	25.6	16,276	10.3	8,938	5.6	10,012	6.3	158,698	100.0
(City)	(50,901)	(50.0)	(29,837)	(29.3)	(13,354)	(13.1)	(7,788)	(7.6)	(0)	(0.0)	(101,880)	(100.0)
(Upstate)	(31,900)	(56.1)	(10,834)	(19.1)	(2,922)	(5.1)	(1,150)	(2.0)	(10,012)	(17.6)	(56,818)	(100.0)
North Carolina	22,280	69.5	6,464	20.2	1,368	4.3	368	1.1	1,570	4.9	32,050	100.0
North Dakota	2,057	80.5	421	16.5	45	1.8	15	0.6	16	0.6	2,554	100.0
Oklahoma	7,374	71.4	2,175	21.1	589	5.7	189	1.8	0	0.0	10,327	100.0
Oregon	8,583	58.0	3,321	22.4	986	6.7	362	2.4	1,547	10.5	14,799	100.0
Rhode Island	5,221	69.5	1,712	22.8	383	5.1	105	1.4	94	1.3	7,515	100.0
South Carolina	9,002	72.0	2,708	21.7	588	4.7	167	1.3	31	0.2	12,496	100.0
South Dakota	1,245	78.8	249	15.8	57	3.6	15	0.9	13	0.8	1,579	100.0
Tennessee	15,074	68.8	5,232	23.9	1,157	5.3	347	1.6	101	0.5	21,911	100.0
Utah ¹	2,310	64.6	860	24.0	249	7.0	139	3.9	18	0.5	3,576	100.0
Vermont	2,359	69.6	755	22.3	186	5.5	59	1.7	29	0.9	3,388	100.0
Virginia	22,040	68.8	7,220	22.5	1,747	5.5	562	1.8	468	1.5	32,037	100.0
Washington	18,024	58.2	7,273	23.5	2,291	7.4	874	2.8	2,516	8.1	30,978	100.0
Wyoming	500	75.1	135	20.3	13	2.0	6	0.9	12	1.8	666	100.0
Total	432,677	62.7	160,971	23.3	49,995	7.2	19,300	2.8	27,372	4.0	690,315	100.0

¹Residents only

²Reported as ≥2

*All states for which data are available (33 States and the District of Columbia)

Table 11
Reported Legal Abortions by Weeks of Gestation*
and State of Occurrence, Selected States,† 1981

State	<8		9-10		11-12		13-15		16-20		≥21		Unknown		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Arizona ¹	3,937	37.2	3,635	34.4	1,693	16.0	975	9.2	129	1.2	4	0.0	200	1.9	10,573	100.0
Arkansas	3,606	63.0	1,137	19.9	420	7.3	196	3.4	173	3.0	140	2.4	50	0.9	5,722	100.0
California ²	78,718	39.0	54,729	27.1	27,227	13.5	16,562	8.2	11,269	5.6	3,278	1.6	10,217	5.1	202,000	100.0
Colorado	6,132	35.6	4,855	28.2	2,133	12.4	914	5.3	851	4.9	120	0.7	2,235	13.0	17,240	100.0
Connecticut ¹	7,565	45.7	5,826	35.2	2,233	13.5	378	2.3	127	0.8	7	0.0	429	2.6	16,565	100.0
Dist. of Col.	14,858	57.3	5,262	20.3	2,591	10.0	1,418	5.5	185 ³	0.7	62 ³	0.2	1,576	6.1	25,952	100.0
Georgia	13,350	41.9	8,648	27.1	4,224	13.2	805	2.5	1,222	3.8	919	2.9	2,726	8.5	31,894	100.0
Hawaii	3,615	54.0	1,756	26.2	704	10.5	337	5.0	230	3.4	46	0.7	4	0.1	6,692	100.0
Idaho	1,268	46.9	840	31.0	428	15.8	137	5.1	5	0.2	3	0.1	25	0.9	2,706	100.0
Illinois ¹	35,759	52.4	20,071	29.4	8,518	12.5	1,486	2.2	825	1.2	10	0.0	1,621	2.4	68,290	100.0
Indiana ¹	9,352	62.3	3,970	26.4	1,320	8.8	66	0.4	75	0.5	0	0.0	233	1.6	15,016	100.0
Kansas ¹	3,698	35.4	2,873	27.5	1,804	17.3	787	7.5	775	7.4	464	4.4	47	0.4	10,448	100.0
Louisiana	10,150	55.7	4,289	23.5	1,884	10.3	790	4.3	239	1.3	1	0.0	884	4.8	18,237	100.0
Maine	1,744	53.2	1,035	31.6	400	12.2	41	1.3	30	0.9	0	0.0	27	0.8	3,277	100.0
Maryland	16,140	57.9	7,013 ³	25.2	3,169 ³	11.4	526 ³	1.9	911 ³	3.3	96	0.3	0	0.0	27,855	100.0
Massachusetts	21,907	53.5	11,089 ³	27.1	4,450 ³	10.9	1,282 ³	3.1	1,714 ³	4.2	448	1.1	23	0.1	40,913	100.0
Michigan	20,233	44.2	12,321	26.9	5,569	12.2	3,704	8.1	2,192	4.8	652	1.4	1,116	2.4	45,787	100.0
Minnesota	7,958	43.5	5,302	29.0	2,571	14.0	1,283	7.0	992	5.4	198	1.1	0	0.0	18,304	100.0
Mississippi	2,431	43.7	1,716	30.9	830	14.9	300	5.4	37	0.7	11	0.2	236	4.2	5,561	100.0
Missouri	6,918	37.2	6,111	32.8	3,405	18.3	1,318	7.1	453	2.4	83	0.4	316	1.7	18,604	100.0
Montana	1,306	34.0	1,457	38.0	687	17.9	205	5.3	67	1.7	10	0.3	106	2.8	3,838	100.0
Nevada	5,068	69.8	1,223 ³	16.8	634 ³	8.7	232 ³	3.2	77 ³	1.1	6	0.1	19	0.3	7,259	100.0
New Jersey	16,086	55.0	6,256	21.4	2,971	10.2	2,110	7.2	1,656	5.7	175	0.6	0	0.0	29,254	100.0
New Mexico	2,361	45.5	1,482	28.5	685	13.2	431	8.3	190	3.7	3	0.1	42	0.8	5,194	100.0
New York	81,218	51.2	39,003	24.6	17,883	11.3	8,015	5.1	7,835	4.9	2,936	1.9	1,808	1.1	158,698	100.0
(City)	(54,799)	(53.8)	(23,036)	(22.6)	(10,570)	(10.4)	(5,174)	(5.1)	(5,755)	(5.6)	(2,273)	(2.2)	(273)	(0.3)	(101,880)	(100.0)
(Upstate)	(26,419)	(46.5)	(15,967)	(28.1)	(7,313)	(12.9)	(2,841)	(5.0)	(2,080)	(3.7)	(663)	(1.2)	(1,535)	(2.7)	(56,818)	(100.0)
North Carolina	13,469	42.0	8,974	28.0	4,898	15.3	2,473	7.7	1,072	3.3	143	0.4	1,021	3.2	32,050	100.0
North Dakota	1,442	56.5	773	30.3	228	8.9	90	3.5	11	0.4	10	0.4	0	0.0	2,554	100.0
Ohio	25,711	56.4	4,678	10.3	1,192	2.6	596	1.3	256	0.6	543	1.2	12,591	27.6	45,567	100.0
Oklahoma	8,381	81.2	1,413	13.7	380	3.7	90	0.9	27	0.3	36	0.3	0	0.0	10,327	100.0
Oregon	7,093	47.9	4,841 ³	32.7	1,630 ³	11.0	638 ³	4.3	333 ³	2.3	33	0.2	231	1.6	14,799	100.0
Pennsylvania	40,108	64.0	14,099	22.5	5,000	8.0	1,677	2.7	1,620	2.6	51	0.1	146	0.2	62,701	100.0
Rhode Island	3,911	52.0	2,347	31.2	792	10.5	271	3.6	188	2.5	--	--	6	0.1	7,515	100.0
South Carolina ¹	7,051	56.4	3,485	27.9	1,388	11.1	443	3.5	72	0.6	1	0.0	56	0.4	12,496	100.0
South Dakota	712	45.1	429	27.2	122	7.7	183	11.6	94	6.0	24	1.5	15	0.9	1,579	100.0
Tennessee	8,304	37.9	7,153	32.6	4,109	18.8	1,214	5.5	276	1.3	53	0.2	802	3.7	21,911	100.0
Utah ⁴	1,425	39.8	1,394	39.0	490	13.7	247 ³	6.9	1 ³	0.0	0	0.0	19	0.5	3,576	100.0
Vermont	2,031	59.9	885	26.1	391	11.5	75	2.2	3	0.1	--	--	3	0.1	3,388	100.0
Virginia ¹	18,590	58.0	7,691	24.0	3,376	10.5	600	1.9	1,142	3.6	135	0.4	503	1.6	32,037	100.0
Washington ¹	17,610	56.8	8,088	26.1	3,609	11.7	821	2.7	700	2.3	82	0.3	68	0.2	30,978	100.0
Wyoming ¹	366	55.0	209	31.4	69	10.4	3	0.5	2	0.3	--	--	17	2.6	666	100.0
Total	531,582	49.3	278,358	25.8	126,107	11.7	53,719	5.0	38,056	3.5	10,783	1.0	39,418	3.7	1,078,023	100.0

¹Weeks of gestation based on physician's estimate

²Distribution based on data from state health department survey of hospitals and clinics, applied to total abortions reported

³Reallocation of reported abortions into comparable categories based on percentage distribution of abortions by single weeks of gestation reported by 29 states

⁴Residents only

*Weeks from last menstrual period

†All states for which data are available (39 States and the District of Columbia)

--Not reported

Table 12
Reported Legal Abortions by Type of Procedure and State of Occurrence,
Selected States,* 1981

State	Suction Curettage		Sharp Curettage		Intrauterine Saline Instillation		Intrauterine Prostaglandin Instillation		Hysterotomy/ Hysterectomy		Other ¹		Unknown		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
AZ	9,962	94.2	252	2.4	1	0.0	4	0.0	2	0.0	113	1.1	239	2.3	10,573	100.0
AR	5,280	92.3	40	0.7	2	0.0	234	4.1	16	0.3	146	2.6	4	0.1	5,722	100.0
CA ²	177,780	88.0	18,091	9.0	2,916	1.4	2,322	1.1	148	0.1	73	0.0	670	0.3	202,000	100.0
CO	14,049	81.5	125	0.7	76	0.4	640	3.7	14	0.1	195	1.1	2,141	12.4	17,240	100.0
CT	16,039 ³	96.8	10	0.1	122 ⁴	0.7	-- ⁴	--	3	0.0	20	0.1	371	2.2	16,565	100.0
DC	22,284	85.9	3,274	12.6	216	0.8	--	--	--	--	42	0.2	136	0.5	25,952	100.0
GA	26,105	81.8	3,908	12.3	1,700	5.3	84	0.3	51	0.2	39	0.1	7	0.0	31,894	100.0
HI	6,096	91.1	55	0.8	9	0.1	98	1.5	1	0.0	424	6.3	9	0.1	6,692	100.0
ID	2,674	98.8	4	0.1	5	0.2	--	--	1	0.0	--	--	22	0.8	2,706	100.0
IL	65,544	96.0	122	0.2	19	0.0	727	1.1	17	0.0	597	0.9	1,264	1.9	68,290	100.0
IN	14,044	93.5	115	0.8	13	0.1	0	0.0	5	0.0	279	1.9	560	3.7	15,016	100.0
KS	9,545	91.4	51	0.5	9	0.1	75	0.7	8	0.1	755	7.2	5	0.0	10,448	100.0
LA	17,717	97.1	19	0.1	--	--	1	0.0	4	0.0	315	1.7	181	1.0	18,237	100.0
ME ⁵	3,184	73.7	1,066	24.7	22	0.5	26	0.6	3	0.1	18	0.4	0	0.0	4,319	100.0
MD	26,660	95.7	153	0.5	302	1.1	82	0.3	6	0.0	650	2.3	2	0.0	27,855	100.0
MI	43,582	95.2	0	0.0	2,030	4.4	168	0.4	7	0.0	0	0.0	0	0.0	45,787	100.0
MN	15,741	86.0	1	0.0	0	0.0	38	0.2	0	0.0	2,524	13.8	0	0.0	18,304	100.0
MS	5,507	99.0	11	0.2	1	0.0	5	0.1	22	0.4	14	0.3	1	0.0	5,561	100.0
MO	17,572	94.5	52	0.3	2	0.0	25	0.1	3	0.0	868	4.7	82	0.4	18,604	100.0
MT	3,755	97.8	4	0.1	1	0.0	45	1.2	4	0.1	29	0.8	0	0.0	3,838	100.0
NB ⁵	5,742	99.2	39	0.7	0	0.0	1	0.0	2	0.0	3	0.1	2	0.0	5,789	100.0
NV	7,213	99.4	1	0.0	3	0.0	1	0.0	0	0.0	41 ⁶	0.6	-- ⁶	--	7,259	100.0
NJ	13,076	44.7	14,751	50.4	1,163	4.0	55	0.2	15	0.1	39	0.1	155	0.5	29,254	100.0
NM	4,978	95.8	8	0.2	5	0.1	3	0.1	--	--	154	3.0	46	0.9	5,194	100.0
NY	136,726	86.2	7,419	4.7	10,460	6.6	1,067	0.7	31	0.0	1,748	1.1	1,247	0.8	158,698	100.0
(City)	(87,207)	(85.6)	(4,058)	(4.0)	(8,233)	(8.1)	(596)	(0.6)	(10)	(0.0)	(1,422)	(1.4)	(354)	(0.3)	(101,880)	(100.0)
(Ups.)	(49,519)	(87.2)	(3,361)	(5.9)	(2,227)	(3.9)	(471)	(0.8)	(21)	(0.0)	(326)	(0.6)	(893)	(1.6)	(56,818)	(100.0)
NC	29,978	93.5	233	0.7	483	1.5	482	1.5	38	0.1	63	0.2	773	2.4	32,050	100.0
ND	2,543	99.6	0	0.0	--	--	--	--	--	--	--	--	11	0.4	2,554	100.0
OH ⁵	44,098	84.2	7,394	14.1	435	0.8	--	--	14	0.0	150	0.3	275	0.5	52,366	100.0
OK	10,279	99.5	8	0.1	0	0.0	0	0.0	0	0.0	1	0.0	39	0.4	10,327	100.0
OR	14,239	96.2	210	1.4	5	0.0	310	2.1	2	0.0	32	0.2	1	0.0	14,799	100.0
PA	59,464	94.8	1,419	2.3	980	1.6	313	0.5	21	0.0	489	0.8	15	0.0	62,701	100.0
RI	7,209	95.9	7	0.1	139	1.8	--	--	--	--	--	--	160	2.1	7,515	100.0
SC	12,272	98.2	41	0.3	17	0.1	53	0.4	11	0.1	93	0.7	9	0.1	12,496	100.0
SD	1,242	78.7	242	15.3	31	2.0	--	--	1	0.1	48	3.0	15	0.9	1,579	100.0
TN	21,630	98.7	50	0.2	3	0.0	199	0.9	15	0.1	1	0.0	13	0.1	21,911	100.0
UT ⁷	3,513	98.2	0	0.0	--	--	--	--	1	0.0	1	0.0	61	1.7	3,576	100.0
VT	3,378	99.7	7	0.2	--	--	--	--	--	--	3	0.1	0	0.0	3,388	100.0
VA	30,875	96.4	140	0.4	446	1.4	156	0.5	44	0.1	77	0.2	299	0.9	32,037	100.0
WA	30,120	97.2	110	0.4	565	1.8	142	0.5	16	0.1	14	0.0	11	0.0	30,978	100.0
WY	665	99.8	0	0.0	--	--	--	--	--	--	--	--	1	0.2	666	100.0
Total	942,360	89.7	59,432	5.7	22,059	2.1	7,478	0.7	526	0.1	10,058	1.0	8,827	0.8	1,050,740	100.0

¹Includes instillation procedures not reported as a specific category, and procedures reported as Other (see footnote 4)

²Distribution based on data from state health department survey of hospitals and clinics, applied to total abortions reported

³Includes abortions done by both suction and sharp curettage

⁴Intrauterine prostaglandin instillation included with intrauterine saline instillation

⁵Does not add to total abortions because of some reported combination procedures

⁶Reported as other and unknown

⁷Residents only

*All states for which data are available (39 States and the District of Columbia)

--Not reported

Table 13
Number and Percentage of Reported Legal Abortions, by Weeks of
Gestation and Type of Procedure,* 1981

Weeks of Gestation	Type of Procedure						Total
	Curettage Suction	Curettage Sharp	Intrauterine Saline Instillation	Intrauterine Prostaglandin Instillation	Hysterotomy/ Hysterectomy	Other	
<8	420,950 (93.9)	25,261 (5.6)	306 (0.1)	158 (0.0)	182 (0.0)	1,528 (0.3)	448,385 (100.0)
9-10	229,934 (94.4)	12,512 (5.1)	488 (0.2)	176 (0.1)	51 (0.0)	517 (0.2)	243,678 (100.0)
11-12	104,158 (92.5)	6,673 (5.9)	701 (0.6)	303 (0.3)	34 (0.0)	712 (0.6)	112,581 (100.0)
13-15	39,118 (80.2)	3,788 (7.8)	2,598 (5.3)	1,150 (2.4)	34 (0.1)	2,089 (4.3)	48,777 (100.0)
16-20	15,381 (44.3)	1,602 (4.6)	10,166 (29.3)	4,073 (11.7)	58 (0.2)	3,433 (9.9)	34,713 (100.0)
≥21	2,146 (22.7)	110 (1.2)	5,524 (58.4)	729 (7.7)	50 (0.5)	907 (9.6)	9,466 (100.0)
Total	811,687 (90.4)	49,946 (5.6)	19,783 (2.2)	6,589 (0.7)	409 (0.0)	9,186 (1.0)	897,600 (100.0)

*Based on data from 36 states

Table 14
Number and Percentage of Reported Legal Abortions
by Weeks of Gestation and Age Group,* 1981

Weeks of Gestation	Age Group							Total
	<15	15-19	20-24	25-29	30-34	35-39	≥40	
<8	2,537 (33.1)	91,454 (40.8)	144,009 (49.8)	92,770 (55.6)	51,777 (58.4)	22,490 (59.2)	7,143 (57.8)	412,180 (49.8)
9-10	2,025 (26.4)	65,317 (29.1)	80,281 (27.8)	43,297 (25.9)	22,069 (24.9)	9,308 (24.5)	3,118 (25.2)	225,415 (27.3)
11-12	1,369 (17.9)	34,664 (15.5)	37,044 (12.8)	17,714 (10.6)	8,907 (10.0)	3,481 (9.2)	1,137 (9.2)	104,316 (12.6)
13-15	664 (8.7)	16,407 (7.3)	14,795 (5.1)	7,065 (4.2)	3,226 (3.6)	1,555 (4.1)	456 (3.7)	44,168 (5.3)
16-20	785 (10.2)	12,726 (5.7)	10,050 (3.5)	4,711 (2.8)	2,102 (2.4)	854 (2.2)	395 (3.2)	31,623 (3.8)
≥21	283 (3.7)	3,739 (1.7)	2,947 (1.0)	1,310 (0.8)	640 (0.7)	313 (0.8)	117 (0.9)	9,349 (1.1)
Total	7,663 (100.0)	224,307 (100.0)	289,126 (100.0)	166,867 (100.0)	88,721 (100.0)	38,001 (100.0)	12,366 (100.0)	827,051 (100.0)

*Based on data from 33 states

Table 15
Number and Percentage of Reported Legal Abortions
by Weeks of Gestation and Race,* 1981

Weeks of Gestation	Race		Total
	White	Black & Other	
<8	236,621 (49.7)	93,327 (46.3)	329,948 (48.7)
9-10	129,223 (27.2)	54,359 (27.0)	183,582 (27.1)
11-12	59,203 (12.4)	27,835 (13.8)	87,038 (12.9)
13-15	26,312 (5.5)	13,041 (6.5)	39,353 (5.8)
16-20	18,312 (3.8)	10,340 (5.1)	28,652 (4.2)
≥21	6,049 (1.3)	2,658 (1.3)	8,707 (1.3)
Total	475,720 (100.0)	201,560 (100.0)	677,280 (100.0)

*Based on data from 29 states

Table 16
Number and Percentage of Reported Legal Abortions
by Age Group and Race,* 1981

Age Group	Race		Total
	White	Black & Other	
<15	3,766 (0.7)	3,822 (1.6)	7,588 (0.9)
15-19	164,093 (28.5)	57,059 (24.0)	221,152 (27.2)
20-24	203,312 (35.3)	81,476 (34.2)	284,788 (35.0)
25-29	111,195 (19.3)	52,876 (22.2)	164,071 (20.2)
30-34	59,399 (10.3)	27,818 (11.7)	87,217 (10.7)
35-39	25,782 (4.5)	11,534 (4.8)	37,316 (4.6)
≥40	8,509 (1.5)	3,579 (1.5)	12,088 (1.5)
Total	576,056 (100.0)	238,164 (100.0)	814,220 (100.0)

*Based on data from 34 states

Table 17
Number and Percentage of Reported Legal
Abortions by Marital Status and Race,* 1981

<u>Marital Status</u>	<u>Race</u>		<u>Total</u>
	<u>White</u>	<u>Black & Other</u>	
Married	116,722 (22.5)	47,962 (21.0)	164,684 (22.0)
Unmarried	402,890 (77.5)	180,294 (79.0)	583,184 (78.0)
Total	519,612 (100.0)	228,256 (100.0)	747,868 (100.0)

*Based on data from 30 states

Table 18
Death-to-Case Rate for Legal Abortions by Year,
United States, 1972-1981

<u>Year</u>	<u>Deaths</u> ¹	<u>Abortions</u>	<u>Rate</u> ²
1972	24	586,760	4.1
1973	25	615,831	4.1
1974	26	763,476	3.4
1975	29	854,853	3.4
1976	11	988,267	1.1
1977	17	1,079,430	1.6
1978	9	1,157,776	0.8
1979	18	1,251,921	1.4
1980	9	1,297,606	0.7
1981	7	1,300,760	0.5

¹Excludes deaths from ectopic pregnancy

²Deaths per 100,000 abortions

Table 19
Death-to-Case Rate for Legal Abortions
by Weeks of Gestation, United States, 1972-1976

<u>Weeks of Gestation</u>	<u>Deaths¹</u>	<u>Abortions²</u>	<u>Rate³</u>	<u>Relative Risk⁴</u>
<u><8</u>	10	1,593,649	0.6	1.0
9-10	19	1,100,484	1.7	2.8
11-12	18	600,357	3.0	5.0
13-15	17	216,983	7.8	13.0
16-20	39	249,161	15.7	26.2
<u>≥21</u>	12	48,553	24.7	41.2
Total	115	3,809,187	3.0	

¹Excludes deaths from ectopic pregnancy

²Based on distribution of 2,876,266 abortions (75.5%) with weeks of gestation known

³Deaths per 100,000 abortions

⁴Based on index rate for <8 menstrual weeks' gestation of 0.6 deaths per 100,000 abortions

Table 19a
Death-to-Case Rate for Legal Abortions
by Weeks of Gestation, United States, 1977-1981

<u>Weeks of Gestation</u>	<u>Deaths¹</u>	<u>Abortions²</u>	<u>Rate³</u>	<u>Relative Risk⁴</u>
<u><8</u>	15	3,145,582	0.5	1.0
9-10	13	1,630,650	0.8	1.6
11-12	8	755,496	1.1	2.2
13-15	4	270,062	1.5	3.0
16-20	18	229,408	7.8	15.6
<u>≥21</u>	2	56,295	3.6	7.2
Total	60	6,087,493	1.0	

¹Excludes deaths from ectopic pregnancy

²Based on distribution of 4,270,997 abortions (70.2%) with weeks of gestation known

³Deaths per 100,000 abortions

⁴Based on index rate for <8 menstrual weeks' gestation of 0.5 deaths per 100,000 abortions

Table 20
Death-to-Case Rate for Legal Abortions
by Type of Procedure, United States, 1972-1976

Type of Procedure	Deaths ¹	Abortions ²	Rate ³	Relative Risk ⁴
Instrumental evacuation	56	3,443,151	1.6	1.0
Intrauterine instillation	45	296,910	15.2	9.5
Hysterotomy/hysterectomy	8	18,860	42.4	26.5
Other ⁵	6	50,266	11.9	7.4
Total	115	3,809,187	3.0	

¹Excludes deaths from ectopic pregnancy

²Based on 2,920,783 abortions (76.7%) with type of procedure known

³Deaths per 100,000 abortions

⁴Based on index rate for instrumental evacuation of 1.6 deaths per 100,000 abortions

⁵Includes 2 deaths with type of procedure unknown

Table 20a
Death-to-Case Rate for Legal Abortions
by Type of Procedure, United States, 1977-1981

Type of Procedure	Deaths ¹	Abortions ²	Rate ³	Relative Risk ⁴
Instrumental evacuation	46	5,786,976	0.8	1.0
Intrauterine instillation	11	222,572	4.9	6.1
Hysterotomy/hysterectomy	3	5,092	58.9	73.6
Other	0	72,853	0.0	0.0
Total	60	6,087,493	1.0	

¹Excludes deaths from ectopic pregnancy

²Based on 4,529,834 abortions (74.4%) with type of procedure known

³Deaths per 100,000 abortions

⁴Based on index rate for instrumental evacuation of 0.8 deaths per 100,000 abortions

Table 21
Legal-Abortion Deaths*
by Type of Procedure and Weeks of Gestation,
United States, 1972-1976

Type of Procedure	Weeks of Gestation						Total
	<u><8</u>	<u>9-10</u>	<u>11-12</u>	<u>13-15</u>	<u>16-20</u>	<u>>21</u>	
Curettage	9	17	18	0	0	0	44
Dilatation and evacuation	0	0	0	7	4	1	12
Instillation	0	0	0	5	31	9	45
(Saline)	(0)	(0)	(0)	(1)	(28)	(6)	(35)
(Prostaglandin)	(0)	(0)	(0)	(3)	(3)	(1)	(7)
(Other agents)	(0)	(0)	(0)	(1)	(0)	(2)	(3)
Hysterotomy/ hysterectomy	0	2	0	3	2	1	8
Other ¹	1	0	0	2	2	1	6
Total	10	19	18	17	39	12	115

¹Includes 2 deaths for which type of procedure unknown, 1 at 13-15 weeks' gestation and 1 at 16-20 weeks' gestation

*Excludes deaths from ectopic pregnancy

Table 21a
Legal-Abortion Deaths*
by Type of Procedure and Weeks of Gestation,
United States, 1977-1981

Type of Procedure	Weeks of Gestation						Total
	<u><8</u>	<u>9-10</u>	<u>11-12</u>	<u>13-15</u>	<u>16-20</u>	<u>>21</u>	
Curettage	15	13	7	0	0	0	35
Dilatation and evacuation	0	0	0	4	6	1	11
Instillation	0	0	0	0	10	1	11
(Saline)	(0)	(0)	(0)	(0)	(6)	(1)	(7)
(Prostaglandin)	(0)	(0)	(0)	(0)	(4)	(0)	(4)
(Other agents)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Hysterotomy/ hysterectomy	0	0	1	0	2	0	3
Other	0	0	0	0	0	0	0
Total	15	13	8	4	18	2	60

*Excludes deaths from ectopic pregnancy

Table 22
Death-to-Case Rate* for Legal Abortions
by Type of Procedure and Weeks of Gestation,
United States, 1972-1976

Type of Procedure	Weeks of Gestation						Total
	<8	9-10	11-12	13-15	16-20	>21	
Curettage	0.5	1.6	3.5	0.0	0.0	0.0	1.3
Dilatation and evacuation	0.0	0.0	0.0	6.6	13.2	21.5	8.5
Instillation (Saline)	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)	11.9 (3.0)	17.2 (21.5)	32.8 (26.9)	16.5 (17.8)
(Prostaglandin and other agents ¹)	(0.0)	(0.0)	(0.0)	(45.3)	(6.0)	(58.5)	(13.1)
Hysterotomy/hysterectomy	0.0	64.4	0.0	76.9	53.7	180.8	44.7
Total ²	0.5	1.8	3.4	11.2	18.2	36.8	3.0

¹Denominators for rates include abortions reported as "other" type of procedure (1% of all abortions with procedure known).

²Includes 4 deaths for which type of procedure was classified as "other" and 2 for which type of procedure was unknown

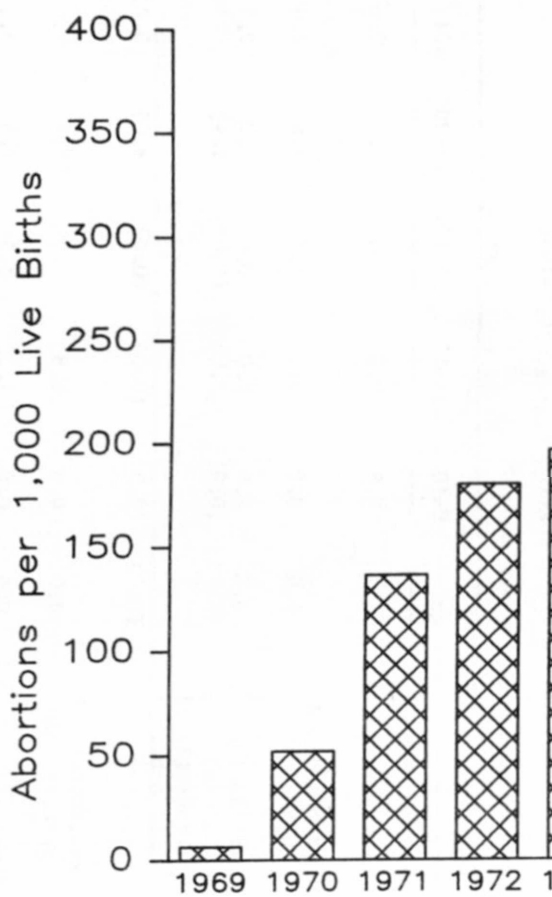
*Deaths per 100,000 abortions; based on distributions of abortions for which type of procedure and weeks of gestation known

Table 22a
Death-to-Case Rate* for Legal Abortions
by Type of Procedure and Weeks of Gestation,
United States, 1977-1981

Type of Procedure	Weeks of Gestation						Total
	<8	9-10	11-12	13-15	16-20	>21	
Curettage	0.5	0.8	0.9	0.0	0.0	0.0	0.6
Dilatation and evacuation	0.0	0.0	0.0	1.7	7.6	8.3	3.4
Instillation (Saline)	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)	6.2 (6.4)	2.1 (3.1)	3.6 (4.3)
(Prostaglandin and other agents)	(0.0)	(0.0)	(0.0)	(0.0)	(6.0)	(0.0)	(2.8)
Hysterotomy/hysterectomy	0.0	0.0	154.8	0.0	198.4	0.0	59.0
Total	0.5	0.8	1.0	1.4	7.5	3.3	1.0

*Deaths per 100,000 abortions; based on distributions of abortions for which type of procedure and weeks of gestation known

Figure 1. Legal



Abortion Ratios, United States, 1969–1981

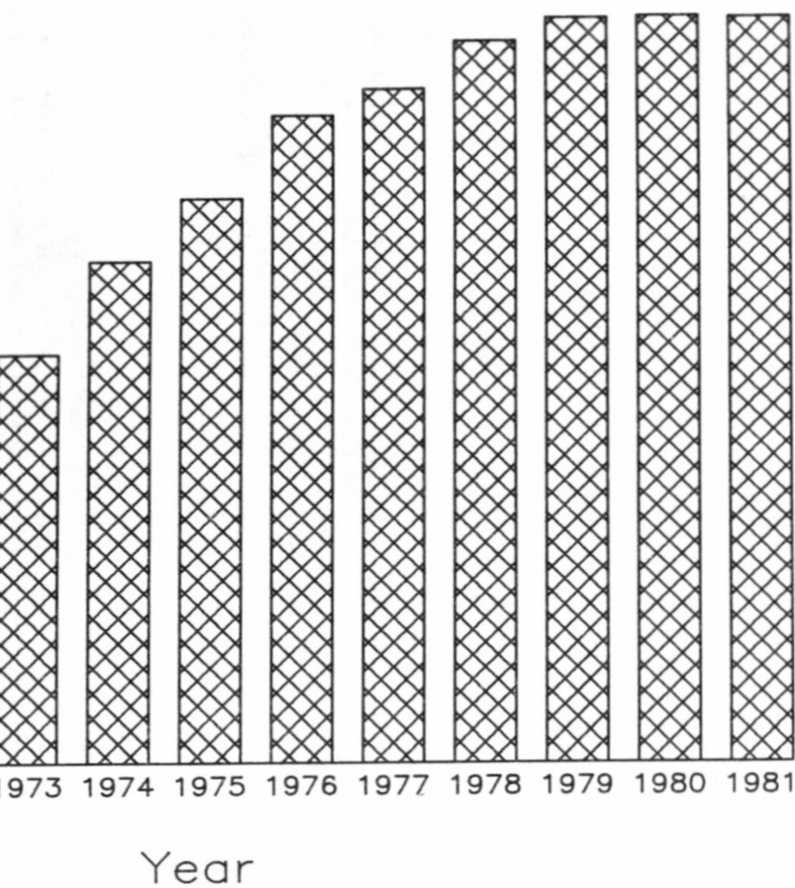
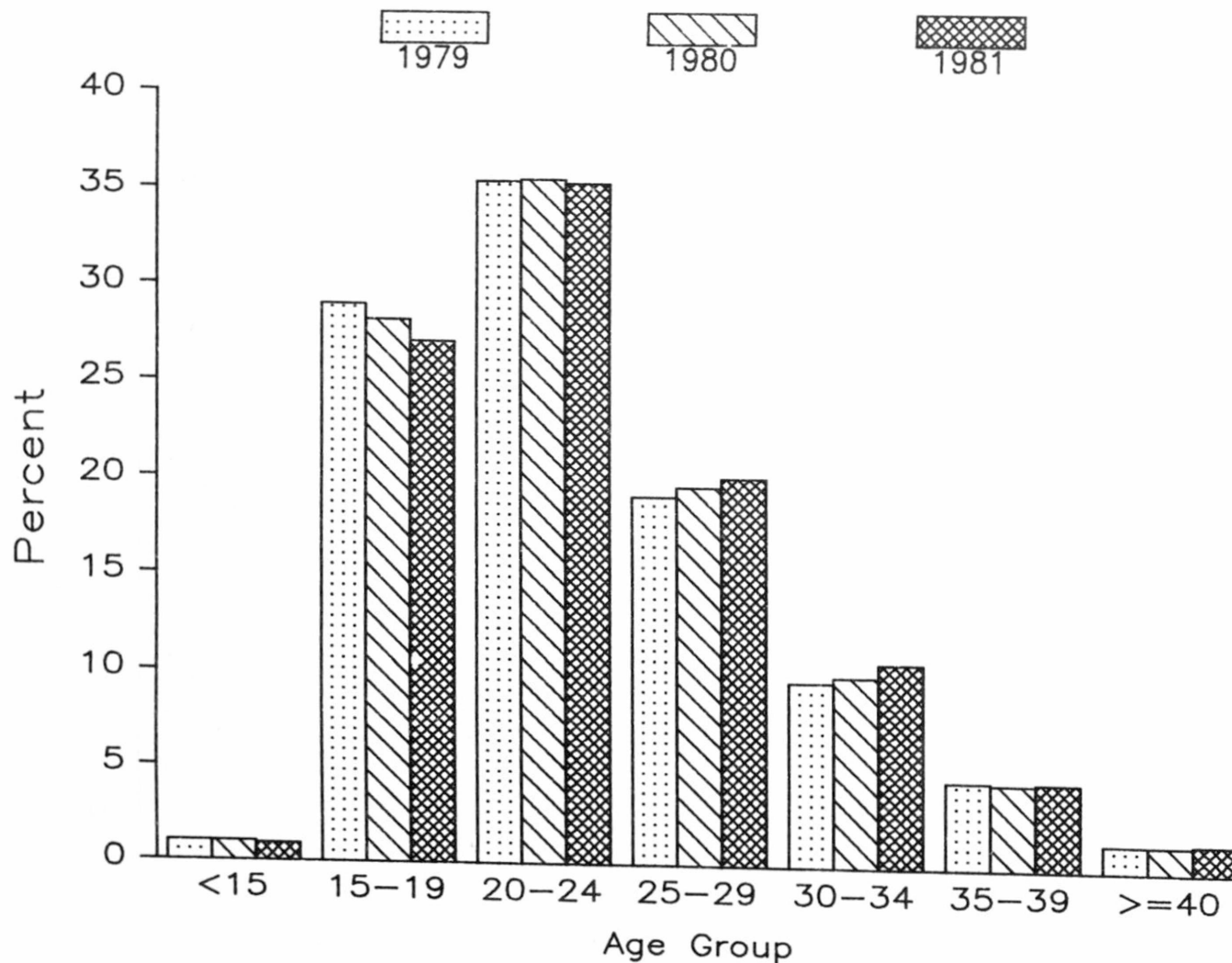
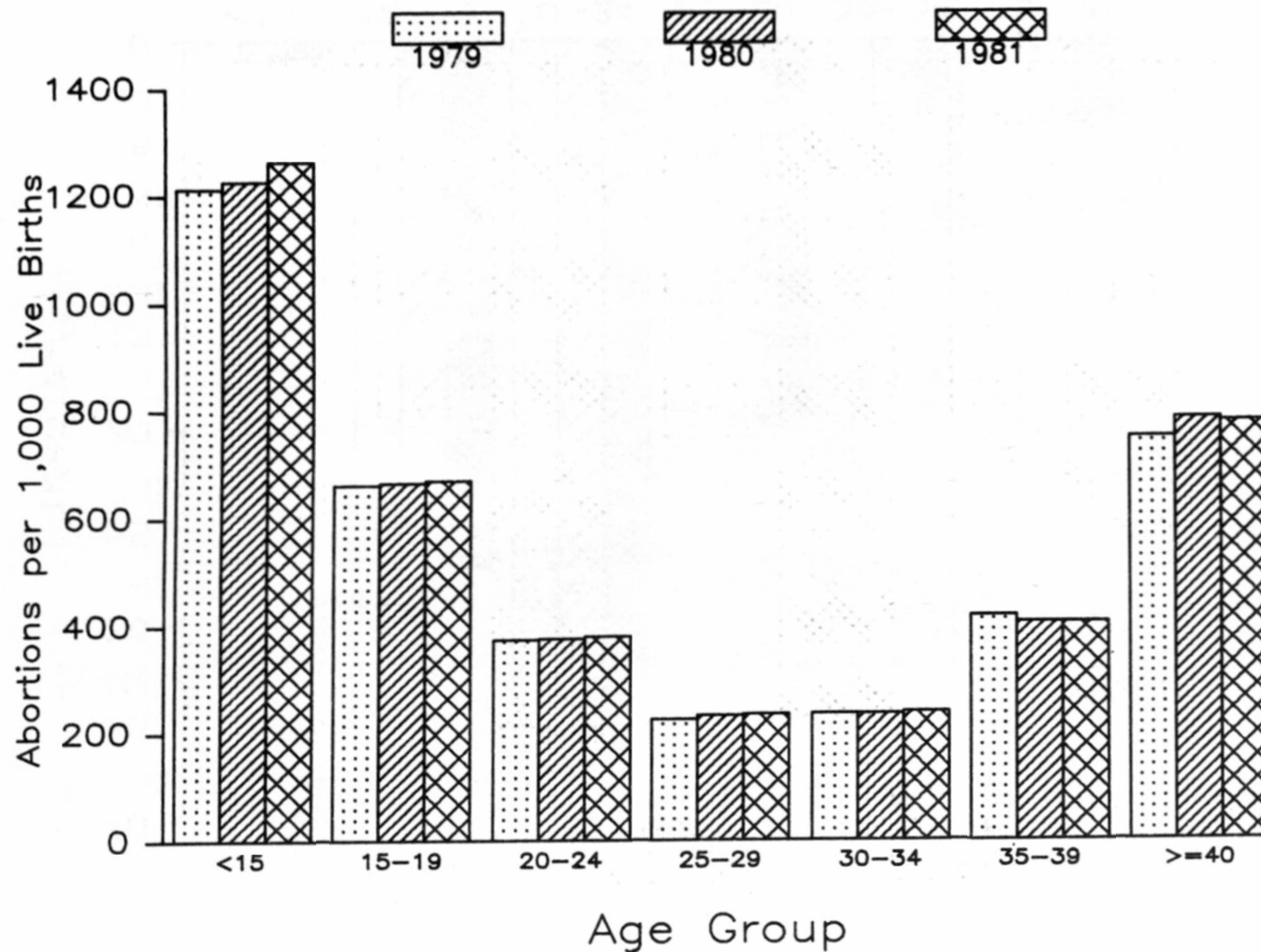


Figure 2. Percentage Distribution* of Reported Legal Abortions by Age Group, Selected States,** 1979–1981



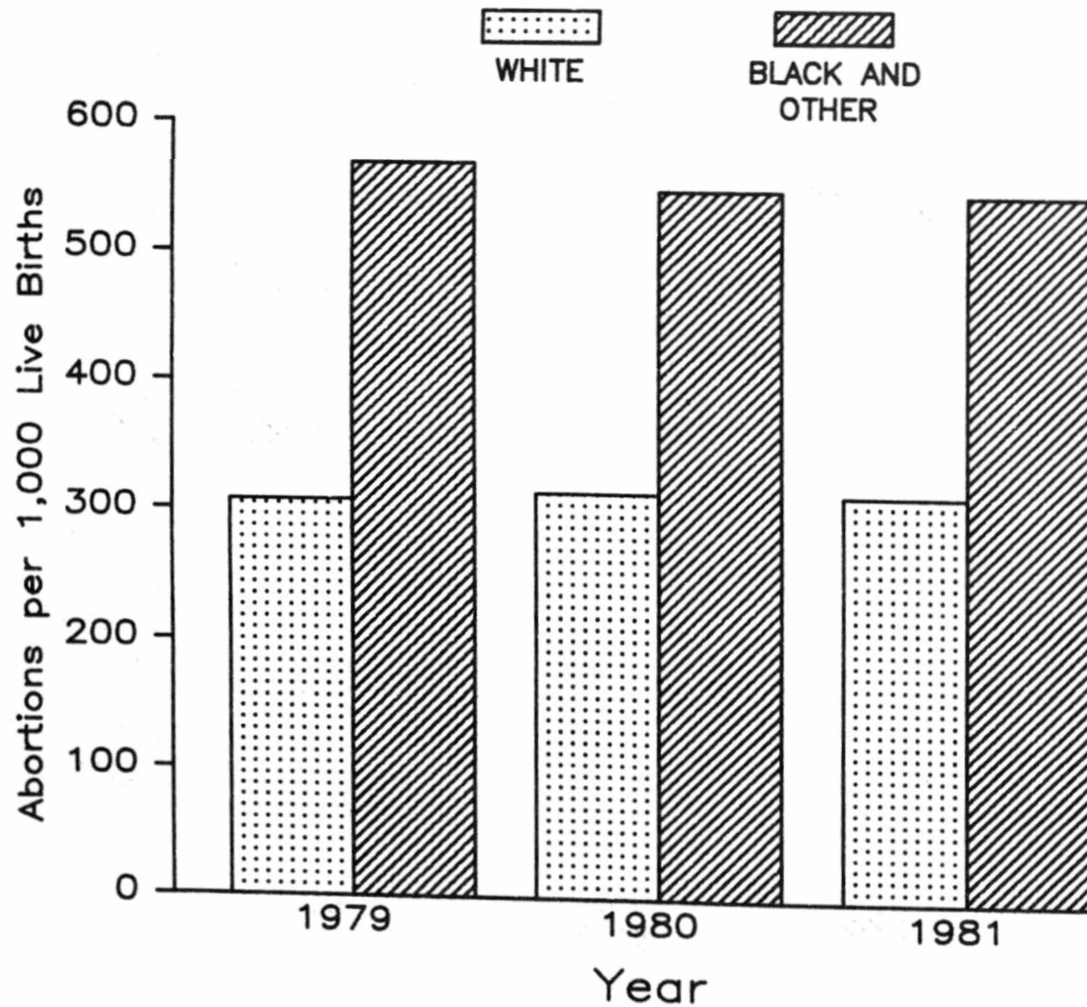
*Based on total number of abortions obtained by women whose ages were known
 **All States with data available for 1979 (36 States), 1980 (41 States), and 1981 (41 States)

Figure 3. Legal Abortion Ratios by Age Group,
United States, 1979–1981



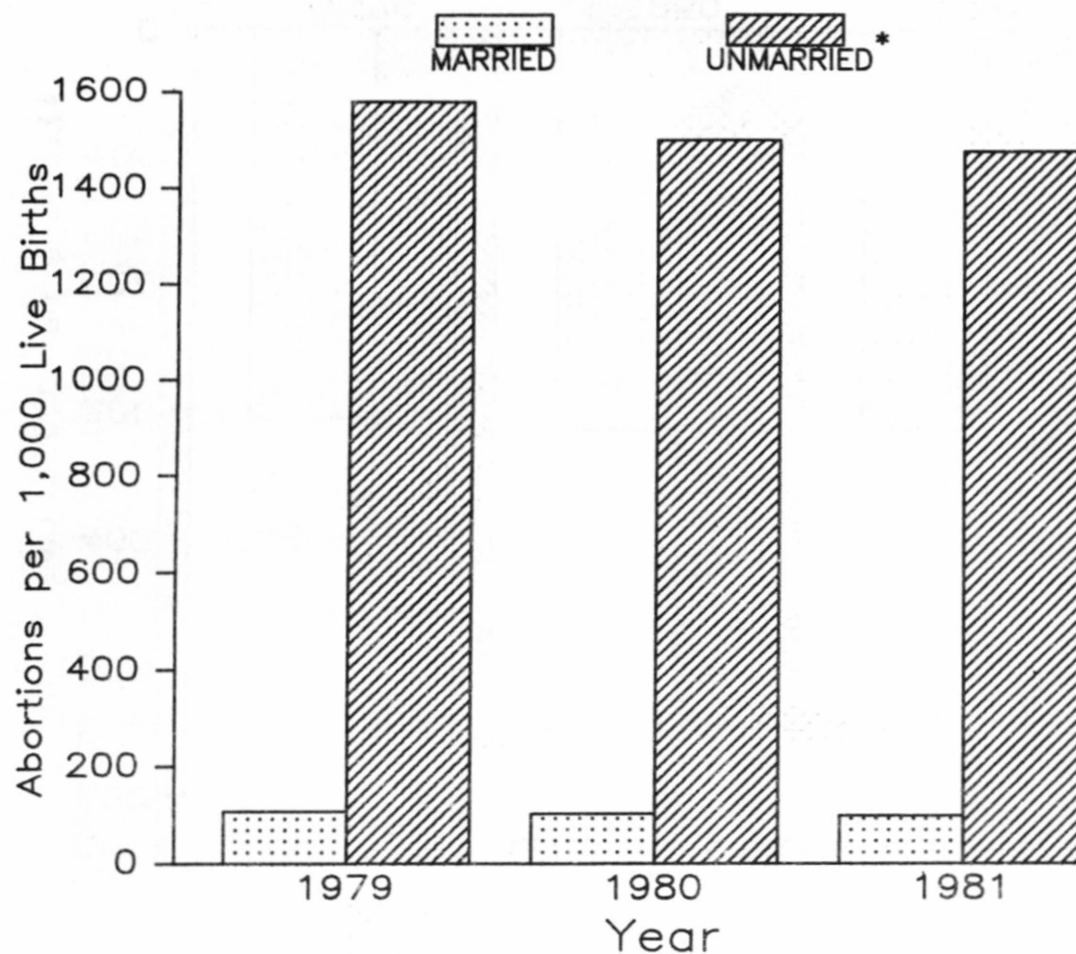
Note: Ratios based on percentage distribution of reported legal abortions (shown in Figure 2) applied to the total number of legal abortions reported to the Centers for Disease Control, 1979–1981, and total live births in the United States, by age of mother, 1979–1981 (from Monthly Vital Statistics Report, National Center for Health Statistics)

Figure 4. Legal Abortion Ratios by Race,
United States, 1979–1981



NOTE: Ratios based on percentage distribution of reported legal abortions (shown in Summary Table) applied to the total number of legal abortions reported to the Centers for Disease Control, 1979–1981, and total live births in the United States, by race of mother, 1979–1981 (from Monthly Vital Statistics Report, National Center for Health Statistics)

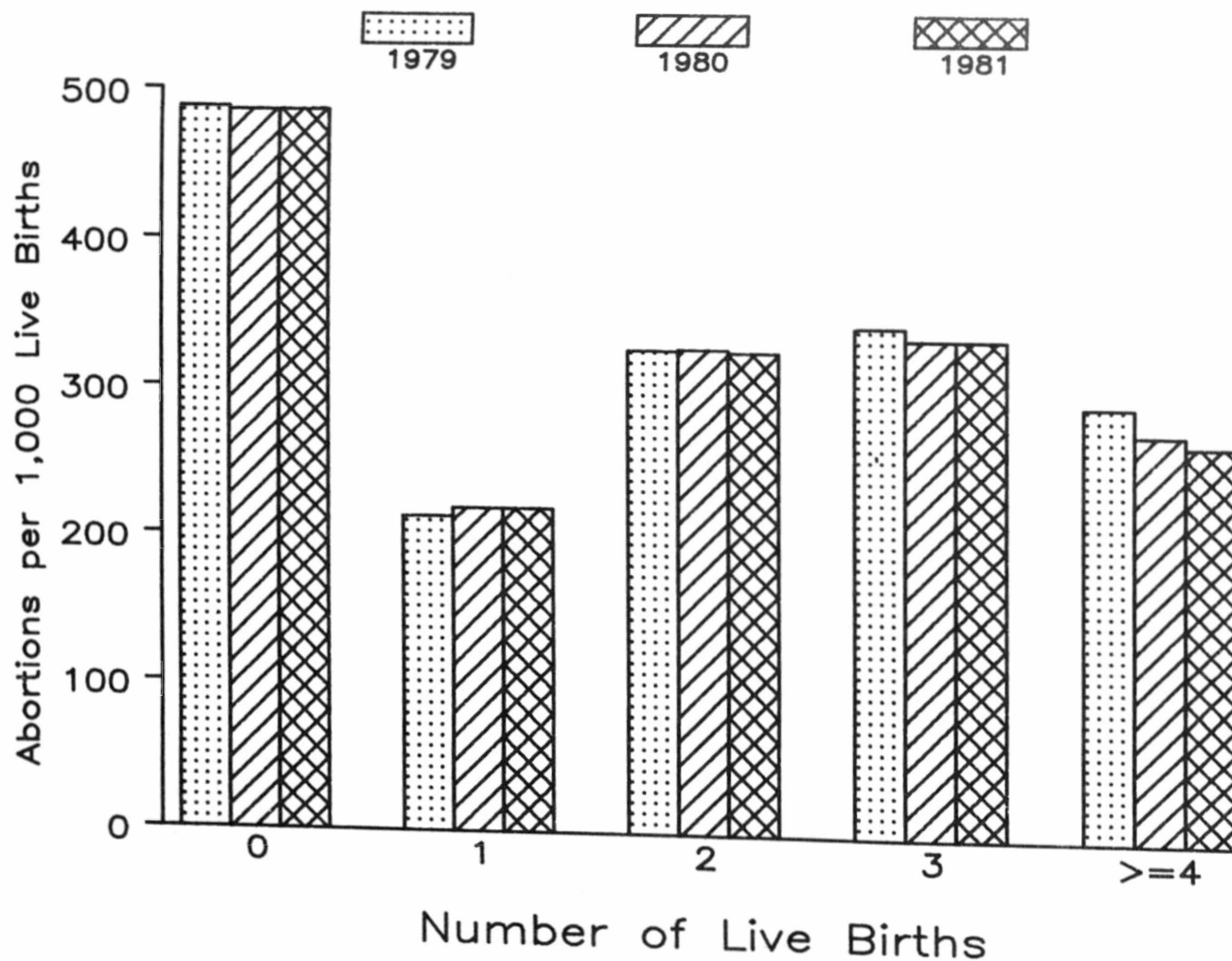
Figure 5. Legal Abortion Ratios by Marital Status,
United States, 1979–1981



*Includes never-married, widowed, and divorced

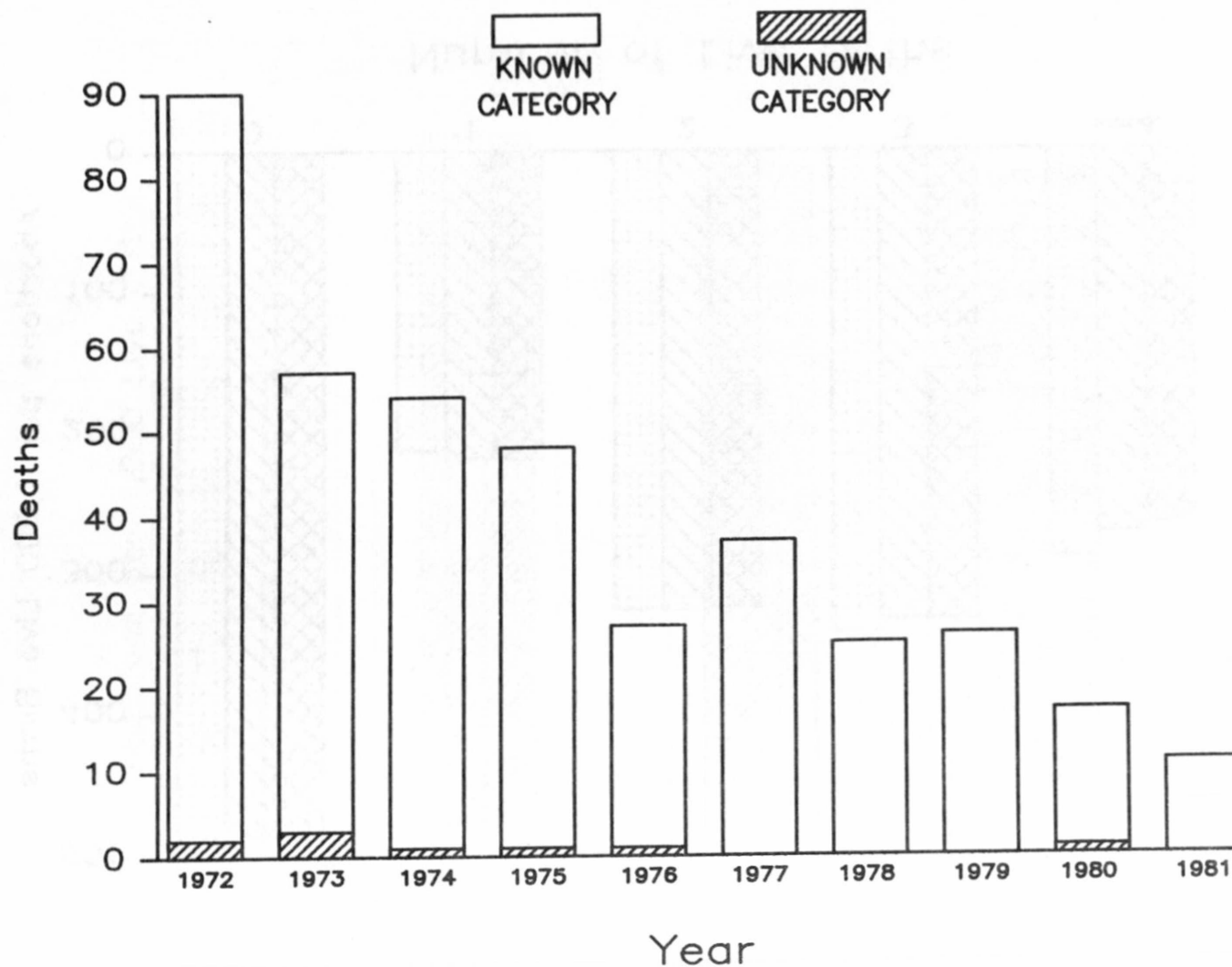
NOTE: Ratios based on percentage distribution of reported legal abortions (shown in Summary Table) applied to the total number of legal abortions reported to the Centers for Disease Control, 1979–1981, and total live births in the United States, by marital status of mother, 1979–1981 (from Monthly Vital Statistics Report, National Center for Health Statistics)

Figure 6. Legal Abortion Ratios by Number of Live Births, United States, 1979-1981



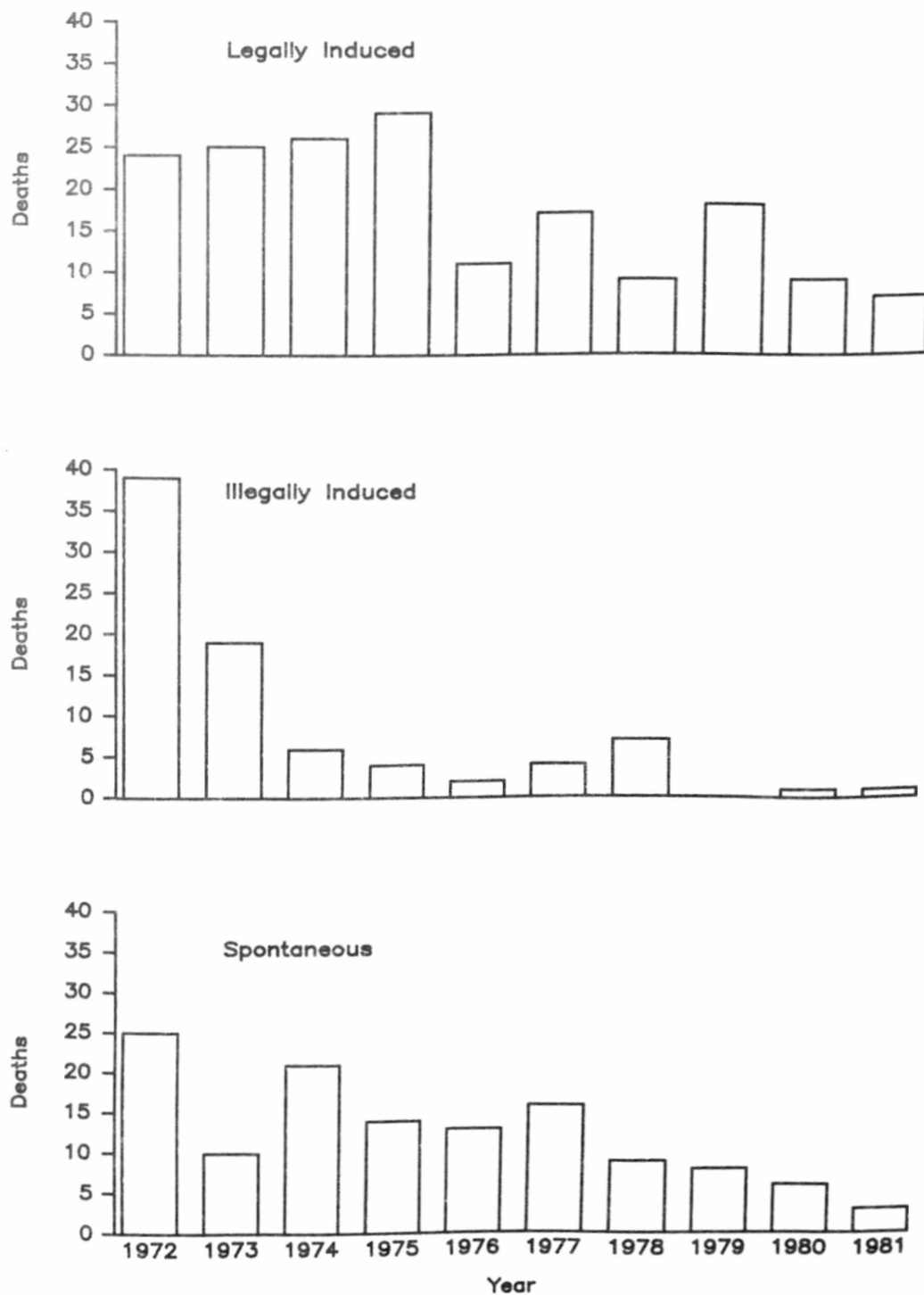
NOTE: Ratios based on percentage distribution of reported legal abortions (shown in Summary Table) applied to the total number of legal abortions reported to the Centers for Disease Control, 1979-1981, and total live births in the United States, by live-birth order, 1979-1981 (from Monthly Vital Statistics Report, National Center for Health Statistics)

Figure 7. Abortion-Related Deaths* By Year,
United States, 1972-1981



*Includes deaths related to legally induced, illegally induced, and spontaneous abortions (known category) and all other abortions (unknown category)

Figure 8. Abortion-Related Deaths by Category* and Year,
United States, 1972-1981



*Excludes unknown category